

GRAIN & FEED JOURNALS CONSOLIDATED

Vol. LXXXV. No. 2

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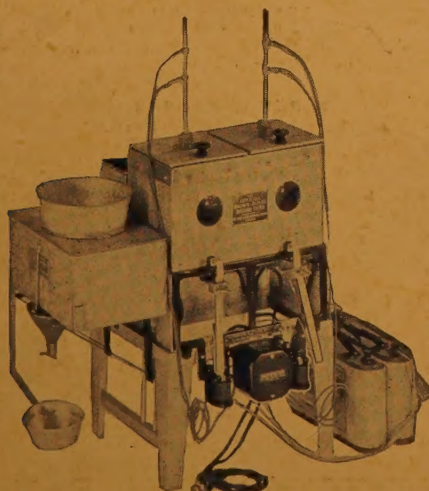
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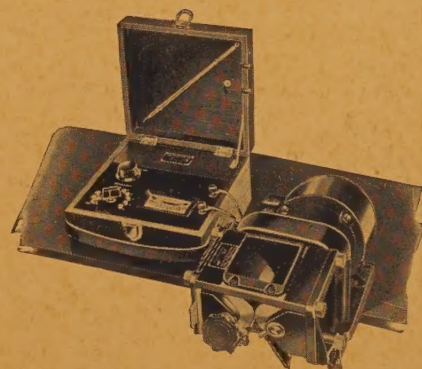
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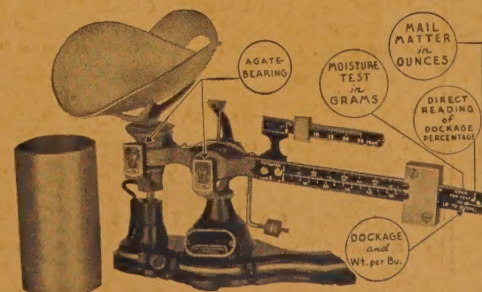
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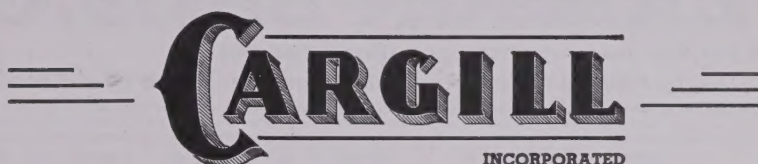
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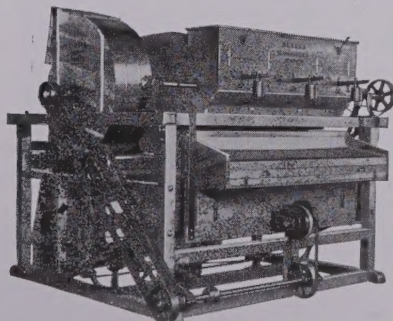
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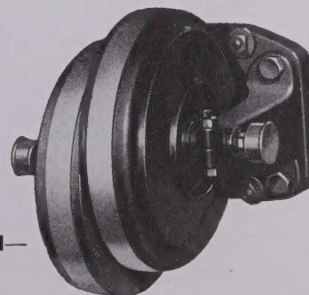
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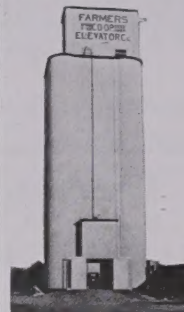
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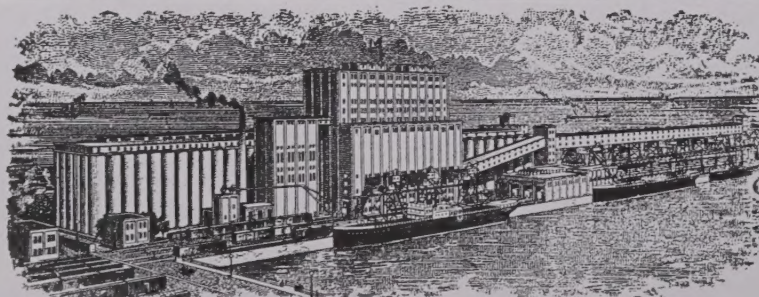
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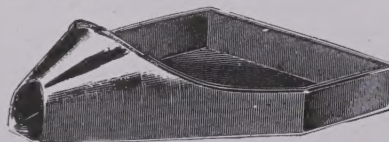
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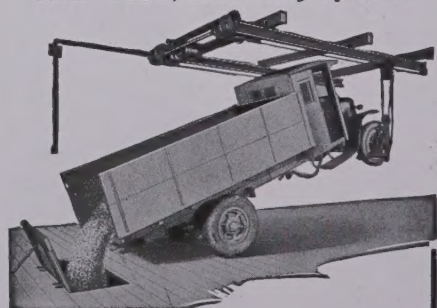
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Capacity bushels per hour: Fine screen 1700; coarse screen 3000.

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(Duplicating)

This form is designed for use in making sworn statements of amount of grain loaded to substantiate claims for loss of grain in transit or when dispute arises. Printed on bond paper, in black ink, size 5 $\frac{1}{2}$ x8 $\frac{3}{4}$ inches, and bound in books of 50 blanks, perforated, and 50 duplicates, with heavy binders board bottom and hinged pressboard top, with two sheets of carbon. Order Form 7 A.W. Weight, 8 oz. Price 75c; three copies \$2.00, plus postage.

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The Last Word in Clark's Direct Reduction Grain Tables

is a combination of our popular 7-card set, Form 3275 Spiral and our new Truck Loads to Bushels, Form 23,090 Spiral which reduce by 10 pound breaks any weight of grain from 600 to 23,090 pounds to bushels of 32, 48, 56, 60, 70 and 75 lbs.

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The spiral binding keeps the cards flat, and in regular sequence, and prevents the exposure of more than one grain at a time so it is easy to keep wide open the tables for the grain being received.

Both sets of tables are printed on heavy six ply tough check of durable quality, 11x13 inches with marginal index. Shipping weight, 3 lbs. You can get both sets described below for \$2.60, plus postage.

Form 3275 Spiral includes tables giving direct reductions of any weight of grain, from 600 to 12,090 lbs. to bushels of 32, 48, 56, 60, 70 and 75 lbs. by 10 pound breaks. This set of Clark's Direct Reduction Grain Tables weighs 2 lbs. Price \$1.50 plus postage. Order 3275 Spiral.

Truck Loads to Bushels. Just what you have been wanting. Now let the big trucks come, so you can determine with a glance the number of bushels and pounds over in each load truck delivers. These six Clark's Direct Reduction Grain Tables continue the reductions made by Form 3275 Spiral, and have a range from 12,100 to 23,090 pounds. Reductions are by 10 pound breaks into bushels of 32, 48, 56, 60, 70 and 75 lbs. Shipping weight, 2 lbs. Price, only \$1.50, plus postage. Order No. 23,090 Spiral.

Direct Reduction Grain Tables

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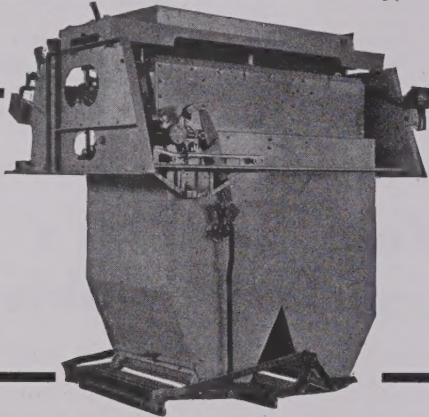
32 lbs. per bushel—OATS

600-1210	1210-1815	1815-2420	2420-3025	3025-3630	3630-4235	4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865
1210-1815	1815-2420	2420-3025	3025-3630	3630-4235	4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470
1815-2420	2420-3025	3025-3630	3630-4235	4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075
2420-3025	3025-3630	3630-4235	4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680
3025-3630	3630-4235	4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285
3630-4235	4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890
4235-4840	4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495
4840-5445	5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100
5445-6050	6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705
6050-6655	6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310
6655-7260	7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915
7260-7865	7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520
7865-8470	8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125
8470-9075	9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730
9075-9680	9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335
9680-10285	10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940
10285-10890	10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545
10890-11495	11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150
11495-12100	12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755
12100-12705	12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360
12705-13310	13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965
13310-13915	13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570
13915-14520	14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175
14520-15125	15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780
15125-15730	15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385
15730-16335	16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990
16335-16940	16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595
16940-17545	17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200
17545-18150	18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805
18150-18755	18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410
18755-19360	19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410	25410-26015
19360-19965	19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410	25410-26015	26015-26620
19965-20570	20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410	25410-26015	26015-26620	26620-27225
20570-21175	21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410	25410-26015	26015-26620	26620-27225	27225-27830
21175-21780	21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410	25410-26015	26015-26620	26620-27225	27225-27830	27830-28435
21780-22385	22385-22990	22990-23595	23595-24200	24200-24805	24805-25410	25410-26015	26015-26620	26620-27225	27225-27830	27830-28435	28435-29040
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22990-23595	23595-24200	24200-24805	24805-25410	25410-26015	26015-26620	26620-27225	27225-27830	27830-28435	28435-29040	29040-29645	29645-30250
23595-24200	24200-24805	24805-25410	25410-26015	26015-26620	26620-27225	27225-27830	27830-28435	28435-29040	29040-29645	29645-30250	30250-30855
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24805-25410	25410-26015	26015-26620	26620-27225	27225-27830	27830-28435	28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065
25410-26015	26015-26620	26620-27225	27225-27830	27830-28435	28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670
26015-26620	26620-27225	27225-27830	27830-28435	28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275
26620-27225	27225-27830	27830-28435	28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880
27225-27830	27830-28435	28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485
27830-28435	28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090
28435-29040	29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695
29040-29645	29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300
29645-30250	30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905
30250-30855	30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510
30855-31460	31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115
31460-32065	32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720
32065-32670	32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325
32670-33275	33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930
33275-33880	33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535
33880-34485	34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140
34485-35090	35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745
35090-35695	35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745	41745-42350
35695-36300	36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745	41745-42350	42350-42955
36300-36905	36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745	41745-42350	42350-42955	42955-43560
36905-37510	37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745	41745-42350	42350-42955	42955-43560	43560-44165
37510-38115	38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745	41745-42350	42350-42955	42955-43560	43560-44165	44165-44770
38115-38720	38720-39325	39325-39930	39930-40535	40535-41140	41140-41745	41745-42350	42350-42955	42955-43560	43560-44165	44165-44770	

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INFORMATION BURO

Grain & Feed Journals, 332 So. La Salle St., Chicago

GRAIN & FEED JOURNALS

CONSOLIDATED
INCORPORATED

332 S. La Salle St., Chicago, Ill., U.S.A.
Charles S. Clark, Manager

A merger of
GRAIN DEALERS JOURNAL
Established 1898

**AMERICAN ELEVATOR &
GRAIN TRADE**
Established 1882

THE GRAIN WORLD
Established 1928

PRICE CURRENT - GRAIN REPORTER
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

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THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., JULY 24, 1940

WHILE some farmers know that state laws make selling grain, covered by a lien without advising the buyer, a crime, cautious dealers will continue to make every effort to keep posted on chattel liens on grain recorded in their districts.

SECRECY following the closing of contracts for mill products by the F.S.C.C. may be the result of a desire to forestall criticism by those who think the lowest bids should be accepted. Publicity of prices out of line might call for an explanation showing that the discrimination was warranted.

ENLARGED elevating and handling facilities not only expedite the receiving and loading out of grain, but whenever any bin gets damp or starts to heat, the rapid handling facilities of the modern elevator are worth many times their cost. The wonder is the small elevating facilities installed in country elevators in times past have not long since been doubled and tripled so as to prevent the heating and spoiling of any bins' contents.

OLD STYLE wagon dumps cannot be safely used in handling heavily laden trucks. Elevator operators who continue their use jeopardize the best interest of their business as well as the lives and limbs of their customers.

WHITE CORN continues to command such an attractive premium the wonder is grain dealers of the corn belt and the agricultural experiment stations do not join hands in a campaign to encourage the growing of a more bountiful supply.

OUR NEWS ITEMS tell of an ever increasing effort being made by country elevator operators to remove dust from cupola. Many installations of blowers have helped to reduce the dust, but never have we published notice that any of these attempts to remove the dust have been discontinued.

HEAVY LOADED ELEVATORS disclose weak structures with every movement of new crop and help again to emphasize the necessity of carefully reinforcing walls against lateral stress. Weak foundations have been directly responsible for many failures and, doubtless, will cause discredit on many hastily erected elevators in the future.

TOTALITARIANISM has made great headway in the Eastern hemisphere and is being attempted in America on the plea that government control of industry is necessary for defense or some other worthy purpose such as social security. The businessmen who permit government intrusion into industry are unwisely facilitating this unwholesome trend.

OVERBIDDING buyers may get a large volume of grain from distant territory for a short time, but farmers will not long continue to haul grain an unusual distance unless rewarded with a price in excess of that obtainable at nearby points so the buyer who kids himself with the suspicion that he is winning distant customers permanently is badly mistaken.

MANY PROMISES of changes in the Wage and Hour Law that would make their application more reasonable to employing industry have not resulted in any changes. Every organization of business men has appealed to the government for a more reasonable interpretation of the law and its application without the destruction of industry. The persistent demand on the part of the grain trade for greater leniency in the employment of labor during the rush of grain to market has resulted in more reasonable consideration by the National Labor Relations Board, but the regulations are still burdensome to an unreasonable degree. The grain trade now has many strong organizations whose influence could be used most effectively with representatives in Congress from the different sections of the country.

WIDE CIRCULATION of the pamphlet compiled by the Feed Manufacturers Ass'n in which officials of every state united in declaring that the feeds put out by reputable manufacturers can be depended upon as non-poisonous, should do much to induce feeds whose animals or poultry die to investigate closer at home before guessing that the purchased feed was poisonous.

LOADING CARS without first carefully inspecting the car and thoroughly cooeping it can generally be depended upon to result in leaks and shortages. Shippers should leave space of twenty-four inches at least between top of grain and roof of car so that grain samplers can readily obtain a fair average sample of cars' contents. The thorough mixing of grain will free shipper from the suspicion of having attempted to plug the load.

KANSAS grain buyers who depend upon their scales for determining the actual weight of grain received were given a most discouraging jolt recently by a report of the Federal Bureau of Standards covering seventy-one truck scales now used in Kansas yards. Only twenty-seven of the lot were well within normal tolerance. The other forty-four scales were inaccurate to a degree that would forbid their use in buying or selling grain. Their discrepancies were so wide as to forbid their continued use.

THE ENACTMENT of state seed laws while no doubt is designed primarily to protect planters from imposition and fraudulent sales of seeds add confusion to merchants doing an interstate business, every established seed merchant has a reputation to maintain and desires to comply with the requirements of the various laws, but unless the lawmakers make some effort to enact laws not in conflict with one another or with the federal law then the merchant doing an interstate business finds it more difficult to continue law abiding.

WHEN grain dealers in 1917, 1918 and 1919 controlled the policy of the government U. S. Food Administration Grain Corporation the farmer received \$2.20 to \$3.50 gold per bushel for his wheat. At the present time with crackpots controlling the policy of the A.A.A. the farmer is getting 65 to 75c per bushel in a depreciated dollar worth only 39 to 45c per bushel. In 1918 memberships in the Chicago Board of Trade sold at \$6,000 and clerks were well employed at good pay. Now memberships are selling at \$1,000, and many clerks are out of work. Such are the fruits of economic control by the army of bureaucrats marching under the flags of the A.A.A., C.E.A., S.E.C., and C.C.C. The moral is to let the farmer run his farm and the businessman run his business, neither of them restricted by politicians.

THE LOSS of wheat from fields has reached a volume which requires country buyers to watch all offerings by strangers and to keep a complete record of each purchase. Auto license, and description of vehicle in which grain is delivered, by stranger helps to locate the thief. No grain buyer enjoys paying for stolen grain a second time.

ONE of the recent developments of marked interest to country elevator operators is the provision of special loading facilities for expediting the loading of grain into large trucks. Many of the elevators having such facilities are now operating lines of trucks of their own and others are loading trucks for nomadic merchants. Doubtless, the itinerant merchant who strives to live within the limits of the laws, will become an established merchant and conduct his business honestly.

THE MOVEMENT of combined wheat to central markets with a great rush has resulted in more congestion than usual and the Association of American Railroads has warned members against using serviceable box cars for storing grain. The large carry-over of surplus stocks from previous crops has also helped to contribute to the congestion and slowed down the unloading of cars without any consideration as to their serviceability. Greatly improved elevating facilities have expedited both the loading and the unloading of cars and judging from the recent results, the congestion will be short-lived.

Elevator Fires and Their Causes

North Dakota's fire marshal has warned the fire chiefs of the state against a repetition of the 1917 burning of country elevators when loaded with grain destined for the British Isles. While the crops of the spring wheat states have not moved to market, the apostles of sabotage are ready to indulge in arson once again so elevator owners are making extra efforts to safeguard their property.

Operators of railroad weed burners are sent out to correct a known fire hazard, but at Somers, Ia., and Hanover, Kan., they are credited with having burned so many weeds, nearby grain elevators were badly scorched.

The recent burning of a grain elevator at Oxford, Ia., after the local fire department had extinguished the afternoon blaze again emphasizes the necessity of keeping a vigilant watch of every elevator for at least twenty-four hours after the first blaze is extinguished. Many properties have been needlessly sacrificed to the breaking out of what was thought to be subdued fires. Continually watching the elevator at least twenty-four hours following the first alarm has saved many properties from destruction and will save many more if vigilance is exercised.

Helping Farmers to Better Seed

Recently, we have received many news items relating to the installation of modern, improved seed cleaning equipment by country elevator operators who are now serving their farmer patrons with clean seed of improved varieties and thereby helping their customers to larger yields of more desirable grain.

The growing of test plots and the general introduction of hybrid seed corn has stimulated the farmers' interest in the planting of carefully selected clean seed of pure variety with the natural result of larger yields of better grain. Not only does the elevator man realize a sure profit from his cleaning and testing, but he increases the volume of grain he handles after harvest. Doubtless, the time is near at hand when these enterprising installers of modern cleaning machines will extend their service to making germination tests.

The farmer knows just as well as the grain dealer that it is useless to plant seed that will not grow. Improved devices for conducting the germination tests have so simplified the work that every grain dealer can readily conduct these tests without interfering with his other work and every test will help his patron to obtain better seed and more profitable results.

Elevator Accidents Increasing

Every elevator operator is anxious to avoid any accident occurring to his customers, but the movement of the new crop seems to have endangered the lives of so many elevator visitors and workers that all are now suffering from a bad attack of the jitters. Greater precaution in safeguarding all moving machinery is necessary if the lives and limbs of elevator workers and patrons are to be protected. All of the recent accidents could have been prevented had the operators exercised greater vigilance in discarding weak ladders and protecting dangerous machinery.

The life of a successful Kansas elevator operator was sacrificed to a weak ladder which broke under his weight.

An exposed screw conveyor is to blame for the manager of an elevator at Shelton, Nebr., being incapacitated.

A Kansas elevator worker is laid up because his right foot was crushed in moving machinery.

A farmer drove on to the elevator dump at Shubert, Nebr., for a load of feed. As he started to drive off the door handle of his car caught in a chain hanging from the hoist pulling the hoist down on to his car and badly lacerating his scalp.

So many accidents have occurred in the operation of country elevator manlifts all are being vigilantly inspected and supplied with new cables and stronger parts.

Where Will Corn Be Stored?

Terminal elevator space in the many Southwestern markets that serve the hard winter wheat belt is filled to overflowing with wheat impounded under government loans. Unable to satisfy all the demands upon them for space, Kansas City elevators have been forced to watch and encourage continued movement of wheat eastward to fill St. Louis elevators, and now St. Louis elevators, groaning under the burden of wheat shipped in from tributary soft wheat districts, see wheat forced on farther north and east to take advantage of storage space that is still available in Chicago and markets farther east.

Rapid filling of space in terminal markets with wheat under the government program is a serious cause for worry in Washington officialdom. Under seal on farms of the corn belt are more than 300,000,000 bus. from last year's bumper corn crop, and very little of this corn has broken out into the channels of trade to satisfy a hungry demand among feeders, feed manufacturers, and the corn industries.

Aug. 1 is close. Aug. 1 is the day when C.C.C. notes on last year's corn loans come due. Farmers will be wanting to empty their cribs to provide room for the new crop.

With terminal storage space filled, and a cry for crib room already beginning a faint echo among the farmers of the corn belt, where will the Commodity Credit Corp. store the corn that will be delivered to it this fall?

Some efforts have already been made by the A.A.A. Farmers are being allowed to reclaim their corn for its loan value, without consideration for the storage investment. But these efforts do not seem to have met with great response.

Obviously country elevators are going to be asked again to share their space with the Commodity Credit Corp. Late in the season little time will be left for construction of annexes. The probable effect in each corn growing community should be considered carefully by its country elevator operators now.

THE FREQUENT reports of wind damage to grain handling plants of all classes clearly indicates they have need of more frequent inspection of roofs, especially of iron cladding, as the wind seems disposed to pick up any and everything that is loose. Roofing and siding needs renailing occasionally.

THE MISSISSIPPI River is accumulating so many dams, a nine foot channel between the Twin Cities and St. Louis is expected soon to be a reality and when the navigation of the Mississippi becomes practical and permanent more elevators will be erected along the Father of Waters. Shippers who are able to use water transportation are able to make deliveries at a much lower cost.

The Hottest of the Year

For many years owners of grain handling plants have looked upon July and August as the most hazardous months for their physical properties any time on the calendar. So long as 99% of the grain elevators and feed mills were constructed of inflammable material, it was natural that more buildings should burn during July and August because not only the wood buildings, but the surrounding weeds are dryest during July and August. In the days of the more general use of wood shingles and wood siding covered elevators, the wood curled up under the hot sun to catch flying sparks and it was perfectly natural that more of these inflammable structures should go up in smoke during July and August, but the use of iron roofs and siding has given such protection to these properties as to reduce the locomotive spark hazard to a minimum.

Grain dealers who are interested in the continued use of their property are vigilantly observing the hazards of their plants and striving to correct all known hazards with the result that fewer destructive fires occur with a marked reduction in the losses and in the cost of insurance in mutual companies specializing in this class of risks.

Not only are the alert owners of elevators and feed mills striving to keep their plants clear of rubbish and free from accumulation of dust and dirt that affords hiding and breeding places for grain infesting insects of all kinds, but they are anxious to keep their plants in condition to please the fire insurance inspector who has tried to school them in the profitable correction of known fire hazards.

Every customer is glad to comply with the "No Smoking" signs prominently placed about the entrances to the first floor. All elevator workers now interested in having continuous employment recognize the advantage of keeping the water barrels well filled and buckets at convenient points for effective use. The thoughtful employee also will carefully

inspect the entire property and especially all bearings which have been running before leaving for home each night and if he has neglected to lubricate the bearings as he knows he should do, then he will go back to the plant after supper and again inspect the bearings he knows should have been lubricated and inspected.

While July and August have some hazards not common to the other months on the calendar, everyone interested in the continued operation of the plant is coming to recognize extra vigilance and frequent inspection as the first requirement to the surer and safer operation of the plant.

Canada Facing Grain Blockade

Ships do not like to travel to England without armed convoys. Since France capitulated England has felt so much need for her fighting ships that it has ceased the conveying of grain carriers from Canadian lower lake ports. War materials have seized first place in the heart of the convoys, and the British navy.

Cutting off the convoys for Canadian grain has resulted in rapid plugging of Canadian lower lake ports with western Canada wheat destined abroad. Canadian seaboard elevators are so full that the grain is backing up into elevators at the head of the lakes, and threatening to block these facilities before the new harvest starts, unless large export outlets become possible in the next few weeks. Fort William and Port Arthur terminal elevators at the head of the lakes have capacity for 91,487,000 bus. Shipments of wheat from these lake ports dwindled to 3,839,810 bus. during the week ended July 12, while receipts of 6,746,838 bus. during the same week marked another large addition to stocks. July 12 reports of stocks showed Fort William and Port Arthur elevators to be holding 71,817,711 bus. of wheat, 636,175 bus. oats, 1,276,735 bus. barley, 186,438 bus. flaxseed, and 579,524 bus. rye for a combined total of 74,516,583 bus. of grain. A year earlier the total stocks in these elevators amounted to only 24,000,000 bus.

With hardly 15,000,000 bus. of space to cushion further heavy receipts of wheat against the dwindling shipments from lakehead elevators, 4,300 cars of grain were standing on track in Fort William and Port Arthur on July 10, when unloading slowed down to about 600 cars (approximately 1,000,000 bus.) per day instead of the 1,000 car rate at which the elevators were unloading each day during the preceding week. Another 20,000,000 bus. of grain were on wheels in western prairie provinces and in transit between Winnipeg and the lake head, promising to overflow all available space.

The shrinkage in movement of grain from Fort William and Port Arthur proved of little concern to lake carriers. They have been kept busy carrying iron ore to industrial centers. But the shrinkage became a matter of real concern to Canadian grain interests and Canadian railroads. Both look forward to another 400,000,000 bu. Canadian wheat crop when the new harvest starts. The grain interests worry about where they will put it in store. The railroads fear it will tie up their rolling stock on country sidings and block the movement of wheat way back to the farms. Both have been looking to Duluth and Buffalo elevators to prevent this expected blockade, but stocks at both these American lake ports are heavier than they were a year ago, and little space is expected to be available when the new Canadian wheat crop moves. Grain receipts at Buffalo totaled 42,674,000 bus. at the middle of July against 34,908,000 bus. a year earlier, and the outbound movement had dropped to a low figure.

Delay in Starting Suit on Railroad Claim

A claim for damage to a carload shipment in transit was presented by Cohen & Gordon, Chicago, to the Texas & New Orleans R.R. Co., which on June 15, 1934, gave written notice of rejection of claim.

On Oct. 15, 1936, plaintiffs filed suit in the Municipal Court at Chicago, and recovered judgment.

The Appellate Court of Illinois reversed this Feb. 14, 1940, because the suit was not instituted against the carrier within 2 years and 1 day from the date when notice in writing was given by the carrier of rejection of claim, as provided in the B/L.

The court said the railroad company could not waive the provisions of the B/L under the Interstate Commerce Act to give preference to any person in any way whatsoever.—25 M. E. Rep. (2d) 562.

Farmers have unsealed about 6,000,000 bus. out of the 556,000,000 bus. corn sealed and held by the government on Apr. 1. Most of this corn was unsealed by farmers from the 302,000,000 bus. of corn they sealed on farms in the fall of 1939.

Books Received

STATISTICAL ABSTRACT OF THE UNITED STATES, 1939, is the 61st number of this valuable report of the U. S. Department of Commerce covering vital statistics on area and population, public lands, military and civil services, national government finances, income and debt, social security, transportation, foreign commerce, farm crops, and a host of other statistical data. Price, \$1.50 per copy. Available from the Superintendent of Documents, Washington, D. C.

SMOKE SCREEN, by Samuel B. Pettengill, throws light on the drift of America toward national socialism, whereas the nation should be moving away from it. The author points out that the drift is being managed behind the smoke screen of "unguaranteed political promise of the more abundant life." He writes out of an authoritative background that includes eight years in Congress. A special edition of this masterful exposition and defense of constitutional democracy and the American system of free enterprise has been made available at \$1 per copy by America's Future, Inc., 205 E. 42nd St., New York, N. Y.

COMPARISON OF HARD RED WINTER AND HARD RED SPRING WHEATS is bulletin No. 289 of the Kansas State College of Agriculture, Manhattan, Kan. This 57 page bulletin prepared by Dr. R. K. Larmour, visiting professor of milling industry at Kansas State College, is an examination of milling opinions, and an assembly of data covering the baking qualities of the wheats compared. Dr. Larmour points out that a comparison of the two wheats on the same protein basis fails to support the prevalent belief that the hard red spring wheats are superior in baking quality. He found hard red winter wheats to be their equal. The bulletin is free on request to the Kansas State College of Agriculture.

HISTORICAL SKETCH OF MILLERS NATIONAL INSURANCE CO. is published by that organization at Chicago to celebrate its 75th anniversary. This 22 page booklet shows pictures of leading lights in the development of mutual insurance for the thousands of millers and grain dealers who have been identified with the sound and steady growth of the organization, and tells briefly the history of the association of each with the Millers National. Recorded is the beginning of the organization as the Planters Insurance Co. in 1865, the change in name to Fidelity Fire Insurance Co. under Col. Wm. L. Barnum in 1875, and the association with state and national organizations of millers which led to the third and final change of name to Millers National Insurance Co. in 1877. The booklet is free on application to the publishers.

How's Crops

By J. W. FOLEY

Jed Hicks he drives up Main street and he drops in on Si Gregg; and Si Gregg says: "How's crops?"

And sometimes Jed says: "Si, I never see A crop like this one promises to be!" And orders big—all kinds of farm supplies, Till Si he gets real sunshine in his eyes And says to Emmet Pew, the drummer: "Pew, Make that one ton of sugar I said, two; And tell them hullsellers I'll discount Them bills of theirs and pay the hull amount."

Jed Hicks ain't much to look at, but his say Is purty powerful in a business way; And when he says the crop is hard to beat, You see folks perk up all along the street. Si Greg, he gives big orders for his store, And Scrimp Short finds he's got aplenty more Good money to lend out; and everywhere You feel that easy-money-comin' air; It has some meanin' when Scrimp Short he hops Across the street and says to Jed: "How's crops?"

Asked—Answered

[Readers desiring trade information should send query for free publication here. The experience of brother dealers is most helpful. Replies to queries are solicited.]

The Oat Bug?

Grain & Feed Journals: Is it true that the oat bug, a very small winged bug that appears only when oats are ripening, is responsible for the continued poor yields of oats?

Old timers inform me that this bug was unheard of in the days when bumper crops of oats were harvested. Is this bug a native or has he come in from a foreign country?—Chas. R. Milem, Sidney, O.

Comparative Results of Fumigants?

Grain & Feed Journals: We are interested to know about the comparative results in fumigating stored grain in bags with carbon bisulphide, hydrocyanic acid gas, methyl bromide and other fumigants.

We would appreciate information as to which of these chemicals has proved to be properly effective and less dangerous to life and property from the triple point of view of its highly toxic, inflammable or explosive nature.—Almacenes Nacionales de Depósito, S.A.; Mexico, D.F., Mexico.

Ans.: Complete data on the various grain fumigants were published in the Journals Apr. 10, pages 297, 298 and 299.

Receipts in Excess of Storage Capacity?

Grain & Feed Journals: After the house is filled up can the warehouseman ship out grain and keep on issuing warehouse receipts for fresh arrivals in order to take care of his patrons?—S. M. Thornton.

Ans.: The unlicensed elevator operator may issue warehouse receipts in excess of his storage capacity in states where the practice is not prohibited by statute and if not doing business under the United States Warehouse Act or the Uniform Grain Storage Agreement with the Secretary of Agriculture.

If licensed by the state the warehouseman must conform to the state regulations, which in some states permit shipment.

Licensed warehousemen are required to give bonds, and when the amount of bond is based on capacity of the house, it might happen that if the operator shipped out much stored grain

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same occupation. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

July 26, South Dakota Seed Dealers Ass'n, Brookings, S. D.

Aug. 2, 3, Indiana Wholesale Seed Dealers Ass'n, French Lick, Ind.

Aug. 15, 16, New York State Hay & Grain Dealers Ass'n, Syracuse, N. Y.

Aug. 26, 27, National Hay Ass'n, Indianapolis, Ind.

Sept. 26, 27, 28, Pennsylvania Millers & Feed Dealers Ass'n, Atlantic City, N. J.

Oct. 10, 11, 12, Southern Mixed Feed Manufacturers Ass'n and Georgia Feed Manufacturers Ass'n, Athens, Ga.

Oct. 14, 15, Grain & Feed Dealers National Ass'n, 44th annual, Brown Hotel, Louisville, Ky.

June 9, 10, 11, 1941—Society of Grain Elevator Superintendents, Nicollet Hotel, Minneapolis, Minn.

to make room for more, the value of the outstanding receipts would exceed the amount of the bond, creating an undesirable situation.

A bill to permit shipment of stored grain, H.R. 6480, has passed the House.

One-Half Cent More for Handling CCC Corn

Harold E. Theile, sec'y of the Western Grain and Feed Ass'n, calls attention to the difference between form T used last year and form H used this year by the C.C.C., stating that "Corn under form T under which you have been operating for the past year allows only 2c for the handling of corn from the scales to the cars. Under C.C.C. form H, you are allowed 2½c for the same operation."

From Abroad

Britain recently increased the standard price of home grown wheat 33 per cent.

The Quaker Oats plant at the Hague, Holland, was not damaged in the warfare and is in continued operation.

Hungary has announced that on account of the poor harvest only 40 per cent of the normal amount of white flour can be milled.

Southampton, Eng.—Grain elevators and their contents here are reported to have been damaged by fire started by enemy incendiary bombs.

Argentine wheat growers have requested the ministry of agriculture to abolish minimum prices so that crops can be sold to relieve their financial difficulties.

Vitamin B₁ and a calcium salt will be injected into the government white loaf, according to Robert Boothby, parliamentary sec'y of the ministry of foods, of Great Britain.

The wheat crops of Sweden, Hungary and Roumania are officially reported at 186,858,000 bus., against 307,760,000 bus. in 1939. Similar reductions are expected in other countries not giving official reports.

Italy is providing state aid for the construction of grain warehouses during a 25-year period, under an original allowance of 4,000,000 lire, increased in April by an additional 4,000,000 lire of which the first 1,000,000 lire will be available in 1942-43.

The British Ministry of Food has drawn up an agreement to pay the National Federation of Corn Trade Ass'ns 2s 7½d per ton for all wheat and other cereals imported on account of the Ministry, as a reward for services, subject to a maximum of \$5,000,000 for the first year of the war.

The Australian wheat board reports cancellation of some recent sales to Europe on account of the British blockade against conquered countries. Of the 1939-40 crop 118,000,000 bus. has been sold, about 26,000,000 will be sold for local consumption and flour exports, leaving 52,000,000 bus. for which a market has to be found.

Decatur, Ill.—Grain dealers here are complaining about the 80 per cent or more of the wheat being impounded under government loans. They say, "We are just working for the government."

Farmers Tiring of Burocratic Control

Lee M. Gentry, state A.A.A. chairman, says Illinois crop land farmed in co-operation with the program in 1940 was 72.6 per cent of the whole, compared to 77 per cent in 1939. The A.A.A. showed losses in 67 counties, a stand-off in 8, and a gain in 27.

James Dowell, past president of the Illinois Farm Managers Ass'n, whose association members direct farming on 720,000 acres, says farmers in Illinois, Iowa, Indiana and Missouri favor soil conservation, but grumble about crop control. Complaints are made about penalties for overplanting, variations in rules in various sections.

He said many farmers who had signed up for the 1940 program told him they were prepared to harvest their crops and accept resulting penalties.

C. H. Swanson of Paxton says: "We are falling away from the A.A.A. program down here. I own a farm and I do not like regimentation, and most of the rest of them around here feel the same way. The man who buys cheap land benefits from the program, but the farmer who has good land and takes care of it does not need a dole. There are too many A.A.A. people running around telling us how to run our farms."

D. W. Piper of Houma, La., says: "Under burocratic acreage quota rulings, Louisiana sugar cane growers who are American citizens and voters today are barred from growing their natural crop on more than half of their land, while sugar pours in from Cuba, Puerto Rico, Hawaii, and the Philippine Islands."

"Half our land is idle, more than half our people are idle; enormous capital is idle. The burocrats offer no willingness to change from what we now have except further to reduce domestic income by the destruction of our crops thru plow-under orders. At the same time they are favoring the crops of foreign nations."

Redefinition of the term "executive," describing employes exempt from the minimum wage and maximum hours provision of the Act is contemplated following hearings that close July 25.

Chief of Exchange Administration Will Retire

Jos. W. T. Duvel has requested that he be relieved of his duties as chief of the Commodity Exchange Administration, and on Aug. 1 he will be succeeded by Jos. M. Mehl.

Prior to the enactment of the Grain Grades Act Dr. Duvel devoted several years to a study of the grading of grain as practiced by state and Board of Trade inspectors.

When the Grain Futures Administration was created he was made chief, and has been with the Department of Agriculture for 38 years.

His successor, Mr. Mehl, is native of Douglas County, Illinois, and has been with the Department of Agriculture for 20 years, for several years as assistant chief of the C.E.A.



Dr. J. W. T. Duvel, Washington, D. C.

Questions on Storage Agreement Answered

Lee Patrick, commodity loan supervisor of the Indiana A.A.A., at the convention of the Indiana Grain Dealers Ass'n answered the following questions by L. A. Garner of Lawrenceburg relating to the storage of grain by country elevators for the government agencies.

Question: To be approved must I have a state or federal warehouse license? Answer: No.

Q: Do we have a state warehouse law, and is it operative? A: Yes; inoperative.

Q: Since there is no effective state law, and where one is not federally licensed, what are the requirements before one can become approved for handling government storage? A: Sign "Uniform Grain Storage Agreement," give bond and carry proper insurance.

Q: Do I have to stipulate maximum amount of wheat I will store? A: Yes.

Q: What is amount of bond required? A: 5c times bushel capacity of elevator; minimum \$9,500, maximum \$50,000.

Q: If already federally licensed does my bond taken out as thus required, also cover storing for the A.A.A. or must an additional bond be taken out? A: Bond is acceptable if sufficient in amount.

Q: Is financial statement necessary with storage application? A: Yes; two copies properly notarized showing a net worth of at least 10c per bushel of capacity of warehouse.

Q: What is the approximate cost of bond per \$1,000? A: \$5.

Q: Must the bond be written by an approved bonding company? A: Yes.

Q: To whom shall bond be made payable? A: For benefit of receipt-holders.

Q: After approval what receiving fees are allowed for wheat received by wagon? A: 3c bu. If by rail? A: 1/2c bu. What loading out charges are allowed, if received by either truck, wagon or rail? A: 1/2c bu. What is the allowable amount of storage charges? A: If truck wheat 7c; rail wheat 6c. 1/30c per bushel per day storage charge will be allowed for the first 210 days and 1/4c per bushel per month will be allowed for the first 5 storage months for conditioning, insurance and all other charges. When wheat is received by rail 1/30c per bushel will be allowed for storage for the first 180 days and 1/4c per bushel per month will be allowed for the first 5 months for conditioning, insurance and all other charges.

Q: What turning fees are allowed? A: 1/4c per bu. per month for the first 5 months. Does turning allowance also cover payment for insurance? A: Yes.

Q: Is there any allowance for conditioning of wheat such as weevil treatment, cleaning, or drying to reduce moisture? A: Such cost to be paid by producer if the loan is repaid; otherwise, they will be paid by the Commodity Credit Corporation.

Q: How long do these storage contracts run? A: Indefinitely, unless canceled.

Q: Will I be required to continue storing after expiration of contract? A: No.

Q: Can this contract be canceled at any time? A: Only by the government agency.

Q: What is the last date on which farmers may redeem stored wheat to avoid forfeiture to the government lending agency? A: Apr. 30, 1941, or on demand.

Q: What time must elapse before 1940 harvested wheat stored on the farm is eligible for a loan? A: Must have been in farm storage for 30 days.

Q: What is the latest date on which a producer can apply for a loan on farm stored, elevator or terminal stored wheat? A: Dec. 31, 1940.

Q: Are loans available on wheat harvested

in 1939? A: No, unless insurance indemnity wheat.

Q: If wheat is grown in Marion County and stored in the same county what county storage rate applies? A: Marion unless shipped.

Q: If trucked from Marion County to Dearborn County what rate applies? A: Dearborn. Q: If shipped by rail to Dearborn County what loan rate applies? A: Marion County, plus 3c, plus freight.

Q: In case of rail shipment would the producer receive his Marion County loan rate, plus freight that he would have to pay to get the wheat to an approved storing terminal? A: Yes.

Q: What is the lowest grade of wheat acceptable as collateral for a government loan? A: No. 3, or wheat grading No. 4 or 5 on test weight only.

Q: To receive and store wheat, by rail, must I have approved transit privileges at my station and must I record all freight bills, with the local railroad agent, in order to keep the bill alive so that thru rates can be received when the wheat is ordered shipped out? A: Yes, or give equal billing.

Q: Is a new application, for approval, necessary each year, in addition to the new storage contracts? A: No.

Q: If approved and not federally licensed what type of warehouse receipt must be used? A: Wording supplied or approved by C.C.C.

Q: Must all stored wheat be kept separate? A: No.

Q: Is there any provision for shrinkage allowance? A: No, unless conditioning of wheat is necessary, when the producer must bear shrinkage.

Q: Can I operate more than one elevator under the same contract? A: A separate agreement must be signed for each warehouse.

Q: Is separate bond required for each plant? A: No, may use same bond and financial statement.

Q: If I do not wish to store wheat, but only act as a forwarding agency are there any special requirements? A: Producer pays 3/2c for receiving and loading.

Q: As a forwarding agency where do I ship this wheat? A: An approved warehouse.

Q: Who pays the freight on wheat shipped to terminal? A: Producer is reimbursed by government.

Q: Does terminal mail warehouse receipts direct to me or the farmer? A: To shipper.

Q: Do I collect my receiving, conditioning, shipping and other charges from the farmer or the government? A: From the farmer. No receiving charges where receipt is issued.

Q: If producer has not the cash to pay is some safe means provided for me to obtain my fees? A: By producer's letter of transmittal.

Q: Do I collect my freight disbursement from the farmer on this letter of transmittal? A: Freight may be collected by use of letter of transmittal. Freight bills must be registered and kept alive for the benefit of the warehouse receipt holder. The warehouse receipt must bear the initial and number of the car in which the wheat is shipped.

Q: If the producer owes me additional sums, on account, can I also collect these bills on the same letter of transmittal? A: Yes. Bills may be paid by use of letter of transmittal if producer is willing to use this method.

Q: Are the warehouse receipts and all papers turned over to C.C.C. committeemen for final disposition in forwarding to lending agencies? A: Yes.

Q: Can the wheat loan be paid off and whse. receipt redeemed, by the producer, any time prior to the April 30th following loan date? A: Yes.

Q: Do all wheat loans definitely run to April 30th unless paid off? A: No.

Q: Can a farmer take wheat to any elevator, of his choice, for forwarding to approved place of storage? A: Yes.

CORN

Q: Is the new corn crop eligible for storage any place but on farm? A: No.

Q: On the previous year's corn crop, having been stored on the farm, who directs as to which elevator it shall be taken for shipment? A: Producer and County Com'te.

Q: Can country elevators after approval, obtain metal cribs for storing corn? A: Not definitely known at this time, unless extra steel bins are on hand.

Q: What fee is paid for receiving corn by wagon? A: 2c per bushel. By rail 1/2c. For loading out 1/2c. For storing 1c for 7 months. For combined turning and insurance 1/4c for 2 months.

Q: Is there any shelling shrinkage allowance? A: Producer must deliver bushels required.

Q: Who pays the shelling charge? A: Producer. Q: The storage, handling and turning charges? A: C.C.C. if the corn is turned over to the corporation.

Q: From whom can I get storage application blanks and 1940 storage agreement forms? A: C.C.C., Chicago, Ill.

Ted Brasch Retires

Ted Brasch, who has ably conducted the affairs of the Pacific Northwest Grain Dealers Ass'n for the past three years, will still be identified with the grain business, altho his resignation as secretary has been accepted.

As manager of the Nez Perce Rochdale Co. he will have charge of three grain elevators operated by the co-operative at Nezperce, Harris Siding and Greer, Idaho.

Mr. Brasch was born and reared on a farm near Nezperce, and in 1927 was graduated from the high school there, finished the Normal School term in 1933, taught school one year at Fruitland, then attended the University of Idaho, which course he completed in 1937. He studied grain marketing on the Chicago Board of Trade, and later was employed by the Bank of Co-operatives at Spokane in a survey, which position he left to become secretary of the Pacific Northwest Grain Dealers Ass'n.



Ted Brasch, Retiring Sec'y, Pacific N-W Grain Dealers Ass'n.

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Green Bay, Wis., July 14.—Crops are late near Lake Michigan, due to cold weather. Corn is backward and need of high temperature.—C. W. T.

Ellsworth, Kan., July 4.—Only about 25% of acreage harvested and that will average only about 5 bus. Most of this land has been put in corn, canes, milos, etc.—Henry Janousek Grain Co.

Hillsboro, Tex., July 8.—Corn acreage is larger, 40 acres to 110 acres of land; 10 acres to 100 acres in oats, 2% in wheat—not much wheat; one-half per cent in barley; 40% in cotton.—W. C. Robertson & Co.

Washington, D. C., July 19.—Chinch bugs, of major importance this year among insect enemies of crops, have been found in large numbers in southern Iowa, eastern Nebraska and Kansas, northern Missouri, northeastern Oklahoma, and a few localized areas in Illinois and Indiana—U. S. Dept. of Agri.

Carroll, Ia., July 17.—Crops are a little better than a year ago at this time, but we are bothered with the chinch bug in the small grain and some in the corn. We can't tell as yet just how much there will be with them; other ways the crops are better—we can tell more about it in a week or so.—Farmers Grain & Lumber Co.

Springfield, Ill., July 1.—Illinois corn acreage is the smallest in 66 years, soybean and cowpea acreages the largest on record, and crop conditions are up to average or better except for apples and peaches altho late crops in some western counties were beginning to show drought damage at the close of June, according to the July 1st report of the Illinois and Federal Depts. of Agriculture.

Topeka, Kan., July 10.—Winter wheat production is estimated at 89,298,000 bus. as of July 1 compared with 111,619,000 bus. produced in 1939, the ten year (1929-38) average of 135,801,000 bus. and the record production in 1931 of 251,766,000 bus. The July 1 reports indicate corn production of 49,896,000 bus. compared with a production of 37,220,000 bus. last year.—Samuel J. Gilbert, statistician, U. S. Dept. of Agriculture.

Springfield, Ill., July 17.—More rain is needed generally, and the lack of sufficient rainfall is being felt over most of the north and a considerable part of the south, with subsoil correspondingly dry. Corn made mostly good progress over the north, with some areas showing very good to excellent progress and some other areas only fair; in the south progress was mostly fair to good. Winter wheat crop and quality are good. Oats crop is mostly above average. Soybeans are mostly fairly good to good, though some are weedy.—E. W. Holcomb, Meteorologist, U. S. Dept. of Commerce, Weather Bureau.

Decatur, Ill., July 20.—The wheat harvest is practically completed. Yields average below expectations in southern Illinois and better than expected in the central and northern sections. Quality through this section is excellent. While there was a heavy movement, most of the crop was shipped for storage. Corn condition is fair to good, though averaging fully a week later than usual. The most advanced fields are beginning to tassel. Corn has a wonderful color and is now well-cultivated. Although nights have been too cool the past month, the crop has made a very favorable showing and growth has now reached the stage where moisture requirements will be heavier. The oats harvest is getting under way. In this area oats are showing the heaviest yield and best quality ever produced. A much larger percentage of the acreage has been cut with the binder than in recent years, which too is very encouraging so far as keeping quality is concerned. These excellent quality oats that are testing from 32 to 42 pounds will make good feed and will result in a very light movement to market, but a heavy consumption on the farms.—Baldwin Elevator Co.

Buffalo, N. Y., July 15.—The hay harvest in Western New York is one of the biggest in years. The crop of alfalfa, timothy, clover, sudan and soybeans is of a higher quality than it has been in a long time. The leafage on all hay crops is extra thick and the food content of each stem greater.—G. E. T.

Lafayette, Ind., July 11.—The loose smut of wheat is on the rampage again this year. The black, smutted heads are heavily sprinkled in many fields. One farmer reported that after he walked into his field, his trousers were completely covered with the smut spores. This smut destroys the head but does not affect the quality of the wheat as does the stinking smut.—Dr. C. T. Gregory, Purdue University Extension Specialist.

Columbus, O., July 11.—Crop prospects in Ohio on July 1 indicated a smaller corn crop than last year but the production of small grains—wheat, oats, barley, and rye—is expected to exceed that of 1939. The acreage of soybeans for all purposes shows an increase of 30 per cent over last year. Scab is very prevalent in wheat fields this season. The heaviest infestation is in southwestern Ohio. Aside from reducing yields to some extent, the quality of the infected wheat may be lowered.—Glen S. Ray, Sr. U. S. Agri. Statistician.

Edmonton, Alta., July 14.—Wheat continues bad to poor Yorkton northwest to Foam Lake, but better to an average and to slightly above from there, seven hundred miles, to here via Tisdale, Prince Albert, Parkside, North Battleford and Lloydminster. From Bashaw to Cardston via Three Hills, Calgary, MacLeod, 350 miles, it also shows slightly above average. There are many fields now promising from 20 to 25 bus. per acre with moisture enough for the time being as far south as Parkland, but from there on rain would be welcome in most sections and rather urgently southeast.—H. C. Donovan, Statistician, Thomson & McKinnon.

Cedar Rapids, Ia., July 22.—The 1940 corn crop in Iowa is facing serious damage as the temperature in most of the corn belt has been in the 100s for the past week. Only scattered rain thruout the state, some sections getting none. There is considerable damaged corn in some sections from chinch bugs. Corn fields around Harding, Pocahontas, Webster, Polk, Linn, Black Hawk, Johnson and Story the corn is showing signs of firing. Oat crop is most all harvested, threshing is started and the new crop is testing 32 to 38 lbs. in many sections. Much flax has been planted for this year and a good harvest is expected, some places are now cutting.—J. C. K.

Great Falls, Mont., July 16.—Present indications bear out our previous forecast as to spring wheat, namely, a 50% to 75% reduction, especially in our territory, which covers the Triangle and Central Montana, bordered by the Great Northern Railway from Great Falls to Havre on the southeast, Great Falls to Cut Bank on the northwest, and the main line of the Great Northern from Havre to Cut Bank on the north. We also cover the territory in and around Great Falls and the territory on the Milwaukee from Great Falls to Harlowton and from Great Falls to Lewistown on the Great Northern. While a large percentage of our territory is in the winter wheat section, nevertheless the northwest side of the Triangle and the main line of the Great Northern from Havre to Cut Bank is approximately 100% spring wheat. We do not anticipate any spring wheat on the Great Falls to Havre line. The main line of the Great Northern from Havre to Cut Bank is at least 65% to 75% gone right now. The line from Great Falls to Cut Bank on the northwest side of the Triangle is at least 50% gone. Therefore, our handle of spring wheat on this coming crop is going to be relatively small. Would say that if price conditions do not improve that 75% of the spring wheat we do handle will go on government loans. Winter wheat over our territory has started to move and we are pleased to report that the yield is slightly beyond our expectations. It looks like about a seventeen bushel average on the winter wheat now being harvested. Test weight will average about 58 lbs. and the average protein will probably run about 1% higher than last year, or in the neighborhood of 15%. We have a few points that will have 60 lb. of better winter wheat and protein running around 13% to 14%. The average over our whole line in the Triangle and the Judith Basin should average around 58 lbs. and 15% to 16% protein.—Greeley Elevator Co.

Oklahoma City, Okla., July 10.—The 1940 wheat crop for Oklahoma is estimated as 54,390,000 bus., compared to 60,438,000 bus. a year ago and 46,763,000 bus. the 10-year 1929-1938 average.—K. D. Blood, J. W. Whittier, U. S. Dept. of Agri. Statisticians.

Winnipeg, Man., July 19.—Rains in the eastern districts of Saskatchewan have checked further deterioration. Yields on the whole will be below normal over much of this area as crops have suffered from 20% to 50% permanent damage from drought.—McCabe Bros. Grain Co., Ltd.

Minneapolis, Minn., July 17.—Some improvement in Northwest crop prospects has taken place as a result of the timely rains and moderate temperatures which have prevailed in a large part of the territory during the past two weeks. Characteristic of July moisture, the precipitation has come in the form of showers, which in some localities have been light and in others good drenching downpours. Crops not irreparably damaged have been revived, and, while moisture has only been sufficient in many cases to check deterioration, there are many districts where some reserves were built up for the future. All districts, however, have not been favored with moisture, and, in the drouth areas, deterioration has been rapid. The uneven distribution of moisture has resulted in an extraordinary spotted condition, prospects showing an extreme variation from complete failure to bumper possibilities.—Paul C. Rutherford, Statistician, Van Dusen Harrington Co.

Winchester, Ind., July 20.—Wheat in this part of Indiana is better than we expected after hearing so many complaints of black and red rust. We are hearing of plenty of yields of 30 bu. to the acre and more. Think there are some fields in our county that will run 40 bu. to the acre. There is one thing that is disconcerting and that is the mixture of rye. It appears that some of our farmers to meet the government program deliberately put rye in their wheat, sowed it and now are selling it regardless of their contract with the government. I suppose 90% of them will get by with it, get the money besides. We are finding wheat mixed with rye as high as 30%, one dealer told us this morning he bought some that was 50% rye. There is any quantity of it that is 20%. Some of the farmers, to square themselves with the government agents, are saying it was wheat they bought of some elevator for seed. This is probably true but they don't tell them they deliberately took several pounds of rye and mixed with it. They did it so they could sow the full acreage. It is not surprising they do, most people consider it a hand out anyhow and why not get all you can out of the government.—Goodrich Bros. Co., P. E. Goodrich, pres.

Open Interest in Future Deliveries

As reported by the C.E.A. for wheat, corn, oats and rye, and by the Board of Trade Clearing House for soybeans the open interest in all futures on the Chicago Board of Trade recently has been as follows, in 1,000 bus.:

	Wheat	Corn	Oats	Rye	Soybeans
Jan. 13	84,355	67,650	15,324	11,256	7,140
Jan. 20	84,136	46,876	15,096	11,842	7,230
Jan. 27	84,570	45,188	14,623	11,738	7,203
Feb. 3	79,457	43,857	14,161	12,475	6,746
Feb. 10	79,262	44,067	16,644	12,919	6,768
Feb. 17	81,351	44,400	14,427	13,021	6,701
Feb. 24	86,092	44,644	14,181	13,955	6,412
Mar. 2	90,782	44,234	13,888	13,847	6,397
Mar. 9	91,405	43,501	13,627	14,066	6,630
Mar. 16	91,195	42,464	13,561	14,224	6,497
Mar. 23	91,874	42,136	13,681	14,522	6,425
Mar. 30	95,090	41,538	15,560	14,861	6,326
Apr. 6	98,360	40,703	13,316	15,388	6,434
Apr. 13	103,489	39,872	12,989	15,911	6,377
Apr. 20	114,612	37,897	12,949	17,090	6,137
Apr. 27	124,422	34,933	12,675	18,379	5,781
May 4	128,045	31,613	12,601	17,875	5,172
May 9	129,259	32,035	12,006	18,469	4,809
May 11	124,526	30,967	11,493	18,454	4,629
May 18	87,599	27,004	9,202	16,565	3,105
May 25	76,840	24,507	8,514	16,200	2,583
June 1	74,848	23,935	7,209	16,262	2,388
June 8	70,025	23,292	6,831	16,190	2,388
June 15	67,184	23,456	6,339	15,823	2,170
June 22	66,555	23,493	6,818	15,817	2,121
June 29	65,468	22,290	7,087	15,836	2,224
July 6	68,804	22,335	7,643	15,164	1,802
July 13	76,482	21,943	8,296	15,303	1,810
July 20	79,485	20,683	8,474	15,805	1,732

*High, 1940. †No trade.

La Salle, Ill., July 5.—Oats acreage 70%, condition 110%; bean acreage 120%, condition 100%; corn acreage 95%, condition 85%; hay acreage 110%, condition 100%. Corn not as good stand as usual, some replanted. Big deficiency in subsoil moisture; outcome of corn a big problem.—William J. Lyons.

Duluth, Minn.—Minnesota continues to hold substantially to its early fine prospects. In Montana and the Pacific northwest states there are reports of widespread and material crop deterioration since July 1. In North Dakota crop prospects have been lowered under the average for the past ten years and it now appears certain that threshing returns will show the yield for wheat planted about one-half the average, 5 to 6 bushels as against early expectations of 14 to 16 bushels to the acre. The crop prospect on June 1, rarely exceeded in the history of North Dakota, has in the short space of six weeks been deflated to one well below the average.—F. G. C.

N-W Flaxseed Crop Outlook

Minneapolis, Minn., July 20.—Observers of the progress of our Northwestern flax crop in its race against varying weather conditions, pestilence and disease have noted that several districts have arrived at the finish line safely and others are coming close to it. The Iowa flax is ready for harvest. A sample or two from Iowa has already reached this market. Yields are reported to be satisfactory. In southern Minnesota cutting will begin next week. There may be some losses from the black stem and red leaf rust but we do not consider that yields will be very materially reduced. In northern Minnesota and parts of North Dakota rains during the past week have improved somewhat the condition of the flax which up to that time had been poor. A good deal of the flax in these sections, however, is showing a stunted growth so that these rains of the past week have come too late to do that part of the crop any good. The heat wave of the last few days has not had any serious effect on the crop.—Archer Daniels-Midland Co.

Stem Rust in Winter Wheat

Stem rust will cause considerable damage in the east-central part of Kansas this year, the Bureau of Entomology and Plant Quarantine announced July 15. About a third of the wheat fields have been severely damaged in the Emporia, Florence, Eldorado, Newton, and McPherson areas. Fields of Chiefkan, however, of which they are many, show no kernel shrinkage.

Although rust has increased considerably on late wheat in Iowa, particularly weak-strawed varieties in which there has been lodging, heavy infection is not general enough to cause more than slight loss for the State as a whole. The varieties Iowin and Iobred have been resistant wherever examined.

Along the western edge of the winter wheat belt there is practically no stem rust infection, according to recent observations made between Perryton, Texas (in the northern panhandle), and Scotts Bluff, Nebr., when all grain was ripe. On July 7, ripe wheat in extreme northeastern Colorado, in Sedgwick and Phillips Counties, had only a trace of rust.

Damage in central Illinois has been less severe than expected earlier in the season, for rust has caused little injury in the southern or central parts of the State. Only negligible damage is expected to winter wheat in southern Wisconsin. Indiana wheat is escaping serious damage by maturing before rust becomes severe; although damage has been severe in some locations. It is estimated for Ohio that rust has caused one per cent damage to wheat and a trace of damage to barley. Wheat has matured in the southern and central parts of Ohio, Indiana, and Illinois, and is now in soft to hard dough stage as far north as southern Wisconsin.

Winter wheat in southern Minnesota will escape serious stem rust damage in the aggregate. It now appears that injury will be limited to spots in which heavy infection has developed, and where considerable rust has appeared on the necks of plants. Barley also will escape loss unless rust increases very rapidly. Grains in Minnesota are somewhat later than a year ago, winter wheat varying from medium dough to ripe, barley mostly in medium dough, and spring wheat in soft dough.

Drouth is likely to be more destructive than rust on spring wheat in the Dakotas. Harvest is now well under way in southeastern South Dakota and heavy rust infection is present only in a relatively few late fields of winter wheat.

Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

La Salle, Ill., July 5.—Oats on hand, 5%; corn, 85%.—William J. Lyons.

Chicago, Ill.—Chicago, July 18, received 200,000 bus. spring wheat from Duluth by boat.

Ellsworth, Kan., July 4.—Not much wheat sold, mostly all going to government loans.—Henry Janousek Grain Co.

Buffalo, N. Y.—One of the rare cargoes of grain to be taken away from a Buffalo elevator in a steamer is on its way to Philadelphia in the steamer Chester. Ordinarily, grain is sent east by rail or Barge Canal. The Chester will sail the Welland Canal and Lake Ontario and enter the Barge Canal at Oswego. It carries 65,000 bus. of corn loaded at the Superior Elevator.—G. E. T.

Portland, Ore.—Exportation of Argentine corn to the Pacific coast of the United States, a flourishing trade five years ago when many full cargoes of the grain arrived at Northwest ports, shows signs of reviving.—F. K. H.

Harrison, Ark.—A new crop of wheat in this area is being brought to market, the main buyer being Charles Myers, manager of the Myers Milling Co. The home-grown supply is insufficient to meet the demand of the company since the acreage this season in the north Arkansas Ozarks is the smallest in several years. The yield has been good.—J. H. G.

Ottawa, Ont., July 18.—Canadian wheat in store for the week ending July 12, 1940, increased 1,137,556 bus. as compared with the preceding week and increased 183,000,638 bus. when compared with the corresponding week in 1939. The amount in store was reported as 282,251,249 bus., compared with 281,113,693 bus. for the preceding week and 99,250,611 bus. for the week of July 14, 1939. Wheat receipts in the prairie provinces for the week ending July 12, 1940, amounted to 3,615,052 bus., an increase of 540,804 bus. over the preceding week when 3,074,248 bus. were marketed. During the corresponding week a year ago the receipts were 2,489,054 bus. Marketings in the three prairie provinces for the 50 weeks from Aug. 1, 1939, to July 12, 1940, as compared with the same period in 1939 were as follows, figures within brackets being those for 1939: Manitoba, 52,780,240 (43,975,850); Saskatchewan, 230,645,856 (116,159,093); Alberta, 129,379,671 (127,047,048) bus. For the fifty weeks ending July 12, 1940, and the same period in 1939, 412,805,767 and 287,181,991 bus. were received from the farms.—R. H. Coats, Dominion Statistician.

Manhattan, Ill., June 28.—We have shipped the 90,740 bus. of corn stored for C.C.C. since last fall in the Jones Bros. Elevators.—H. Hayes Alexander, Lockport, Ill.

Spokane, Wash., July 17.—Considerable percentage of wheat is going into storage in this section, especially in the winter wheat belt. It is logical to assume that millers will soon become concerned.—F. K. H.

St. Louis, Mo.—Receipts and shipments of the following grains in June compared with June, 1939, expressed in bushels, 1939 shown in parentheses, were as follows: Receipts, rye, 21,000 (1,500); barley, 182,500 (174,400); soybeans, 9,600 (6,400); kafir, 18,200 (19,700); shipments, rye, 18,100 (none); barley, 25,600 (6,400); soybeans, 16,000 (6,400); kafir, 3,800 (5,600); 24 tons of hay were shipped in 1940.—W. J. Krings, Merchants Exchange.

Fort William, Ont.—Receipts and shipments of the following grains during June, 1940, compared with the like month a year ago (shown in parentheses) expressed in bushels were as follows: rye, receipts, 366,558 (541,860); shipments, 205,813 (113,002); barley, receipts, (1,100,150); shipments, 795,961 (1,234,190); flaxseed, receipts, 29,586 (5,006); shipments, 82,356 (9,708); mixed grain, receipts, 10,519 (4,692); shipments, 17,704 (2,547).—E. A. Ursell, statistician, Board of Grain Commissioners.

Duluth, Minn.—Grain receipts in this market for the crop year beginning Aug. 1, 1939, to July 18, inclusive, recently passed thru the 100,000,000 bus. mark but fell 7,530,826 bus. short of equalling the movement in the same period of the 1938-1939 crop year. The incoming grain handled to this date totals 101,780,938 bus. as against 109,311,764 bus. the previous year. Elevators are carrying heavy grain stocks for this time of the year, 26,366,000 bus. as against 18,394,000 last year. The seasonal lull is on in shipping with slack demand from shippers for car or boat tonnage to move supplies.—F. G. C.

Soybean Acreage

Washington, D. C.—The U. S. Dept. of Agriculture reports the acreage of soybeans, in thousand acres, as follows:

State	Average 1929-38	1939	1940
Ohio	241	823	1,070
Ind.	629	1,377	1,460
Ill.	1,394	2,726	2,944
Mich.	32	148	225
Wis.	126	249	311
Minn. ....	...	171	231
Iowa	510	1,160	1,520
Mo.	408	390	421
Kans.	37	50	60
Va.	104	110	110
N. C.	228	306	337
Ky.	116	143	172
Tenn.	162	157	165
Ala.	173	230	235
Miss.	173	276	304
Ark.	121	190	171
U. S.	4,756	9,023	10,286

Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye, barley and soybeans for December delivery at the following markets for the past two weeks in cents per bushel have been as follows:

	Option		July		July		July		July		July		July		July		July	
	High	Low	10	11	12	13	15	16	17	18	19	20	22	23	24	25	26	27
Wheat																		
Chicago	110 3/4	74 1/4	76 1/2	75 1/4	75	75 1/4	74 1/4	76 1/2	75 3/4	75 1/2	75 1/2	75 1/4	74 3/4	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2
Winnipeg*	79 3/4	74 1/4	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2	74 1/2
Minneapolis	84 1/4	72 1/4	76	73 3/4	73 3/4	73 3/4	73 3/4	75 1/2	74 3/4	74 1/2	75 1/4	74 1/2	73 3/4	73	73 3/4	73 3/4	73 3/4	73 3/4
Kansas City	80 1/2	68 1/2	71 1/4	69 1/2	69 3/4	69 3/4	69 3/4	71 1/4	70 1/2	70	70 1/2	69 1/2	69 1/2	69 1/2	69 1/2	69 1/2	69 1/2	69 1/2
Duluth, durum	74	64 1/2	70	69	68 1/2	68	67 1/2	68 3/4	67 1/2	67	68	67 1/2	67 1/2	67 1/2	67 1/2	67 1/2	67 1/2	67 1/2
Milwaukee	85 1/4	74 1/4	76 1/4	75 1/4	75	75	74 1/4	76 1/4	75 1/2	75 1/4	76	75 1/4	74 3/4	...	...	...	...	...
Corn																		
Chicago	67 3/4	53 1/2	56 1/4	55	54 1/2	54 1/2	54 1/4	54 1/4	53 3/4	54 3/4	56 1/4	55 3/4	56 1/2	56 1/2	56 1/2	56 1/2	56 1/2	56 1/2
Kansas City	54	51	...	...	...	51 1/2	51 1/2	51 1/2	51	51 1/4	53 3/4	53 3/4	53 3/4	53 3/4	53 3/4	53 3/4	53 3/4	53 3/4
Milwaukee	60 3/4	53 1/2	56 3/4	55	54 1/2	54 1/2	54 1/4	54 1/4	53 3/4	54 3/4	56 1/4	55 3/4	56 1/2	56 1/2	56 1/2	56 1/2	56 1/2	56 1/2
Oats																		
Chicago	34 1/4	28 5/8	29 5/8	29 1/4	29 1/4	28 3/4	28 3/4	29 1/4	29 1/4	29	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4
Winnipeg	29 1/4	25 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4
Minneapolis	31	26 1/4	27 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4	26 1/4
Milwaukee	34 3/4	28 3/8	29 3/8	29 1/4	29 1/4	28 3/4	28 3/4	29 1/4	29 1/4	29	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4	29 3/4
Rye																		
Chicago	50 3/4	42 1/4	47 1/4	46 3/4	47	47	47 3/4	47 3/4	46 3/4	45 1/2	46 3/4	46	46	45 3/4	45 3/4	45 3/4	45 3/4	45 3/4
Minneapolis	46 3/4	39	44 1/4	43 1/4	43 1/4	43 1/4	44 1/4	44 1/4	43 1/4	42 1/4	43 1/4	43	42 3/4	42 3/4	42 3/4	42 3/4	42 3/4	42 3/4
Winnipeg	47 3/4	39 3/4	44 1/4	43 1/4	43 1/4	43 1/4	44 1/4	44 1/4	43 1/4	42 1/4	43 1/4	43 1/4	42 3/4	42 3/4	42 3/4	42 3/4	42 3/4	42 3/4
Barley																		
Minneapolis	38	36 1/4	37 1/4	37	36 3/4	36 3/4	37	37	36 1/4	37	37	37	37	37	37	37	37	36 1/2
Winnipeg	38 1/2	33 3/4	35 3/4	35 3/4	35 3/4	35 3/4	36 1/2	36 1/2	36 3/4	36 3/4	36 3/4	36 3/4	37 3/4	37 3/4	37 3/4	37 3/4	37 3/4	36 1/2
Soybeans																		
Chicago	75 1/4	71 1/4	74	73 3/4	73 3/4	73 3/4	74	74 1/4	74	74	74 1/4	74 1/4	74 1/4	74 1/4	74 1/4	74 1/4	74 1/4	74
Canada Exchange .....	...	...	85 1/2	85 1/2	86 1/2	87	87 1/2	87 1/2	87 3/4	88 1/4	88 3/4	88 3/4	88 3/4	88 3/4	88 3/4	88 3/4	88 3/4	88 3/4

*Pegged.

Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. Dealers having anything to say of interest to members of the grain trade are urged to send it to the Journals for publication.]

Unfair to Cut Rate for Handling Loan Grain

Grain & Feed Journals: After the issuance of the New Uniform Storage Contract authorizing $3\frac{1}{2}\text{c}$ per bushel for receiving and shipping of eligible grain under government loan, we supposed that this would be accepted by the trade as an established and uniform charge for that service, but it now comes to our attention that various charges are being made—many handling it for less and some for more.

We are also advised that some county committees have refused to honor the $3\frac{1}{2}\text{c}$ charge on the producer's letter of transmittal but wish to repeat, as we have stated before, that this charge so far as unlicensed elevators are concerned, is not regulated, but merely depends upon the dealer's agreement with the producer, and in my opinion, the refusal to accept this $3\frac{1}{2}\text{c}$ charge came about due to a misinterpretation of a letter issued by the C.C.C. under date of July 6 which referred only to licensed warehousemen who were charging the $3\frac{1}{2}\text{c}$ per bushel at time of issuing the warehouse receipt.

This and other trade associations put forth considerable effort to try to get a reasonable rate of handling charges on loan grain, but if some dealers are going to perform this service for less than the established basis and for less than it actually costs, then it is going to be difficult for the trade to maintain a fair price for such services.—J. F. Moyer, sec'y Kansas Grain, Feed & Seed Dealers Ass'n, Dodge City, Kan.

Let's Pull Together for Lower Freight Rates

Grain & Feed Journals: Both country and central market grain elevators are vigorous objectors to the use of trucks in hauling bulk grain over long distances.

Less able to adapt themselves to truck operations, the central market storage elevator operators are more vigorous than are the country elevator operators in their denunciations of the gypsy truckers, tho country shippers, too, often grow voluble in their objections to the nomads, with some justification, considering the number of rubber checks they have received from truckers to whom they sold grain.

With the itinerant truck evil spread well over the country it is odd that central market elevator operators and boards of trade insist on filing objections with the Interstate Commerce Commission each time one of them succeeds in persuading some railroad to reduce its rates along certain lines to compete with truck traffic. The net result of the objections, made obviously to maintain inter-market relationships and freight rate advantages, is that no point is successful in winning freight reductions. Both railroad and Interstate Commerce Commission officials, viewing filed objections to scattered reductions, are led to a conviction that the trade does not know what it wants as a trade.

I hold that the organized grain trade does know what it wants in transportation. It wants to hold the bulk grain traffic to the rails, just as do the railroads. A hundred variations in opinions as to what reductions in rates are necessary to so hold the grain traffic shows up between grain dealers and between markets, but all are agreed that they want the traffic to remain on the rails.

We do not understand why some enterpris-

ing market center has failed to call a meeting of central market traffic representatives to work out a plan for a percentage reduction in all grain freight rates that would be sufficient to keep the grain traffic in its customary channels. We venture a conviction that both the railroads and the Interstate Commerce Commission could be persuaded to listen to a plan for freight rate reductions that is put forth to help the railroads hold traffic, and that does not involve changes in inter-market relationships.

We must keep in mind that freight rates are a tariff on commerce in grain, and that grain will move readily when freight rates do not weight it down with so much additional cost that the prospective consumer cannot afford to buy it.

I should like to read the convictions of others on this important problem.—Illinois Grain Dealer.

Rates of payment and deductions under the Agricultural Conservation, Range Conservation, and Naval Stores programs will be 10% less in 1940 than the tentative rates indicated last November, according to the A.A.A., in order to keep payments within available funds. Parity payments are not affected by the reduction.

Increases Storage Space by Building Concrete Tanks

Lee Railsback, of Railsback Bros. at Weldon, Ill., nearly doubled the storage capacity of his 55,000 bu. cribbed elevator by erecting two cylindrical concrete bins close to his elevator. Each of the two reinforced concrete bins has capacity for 21,000 bus., which brought the total storage capacity of the elevator to 97,000 bus.

The reinforced concrete tanks are each 24 ft. in diameter and 56 ft. high above the ground, supported on a concrete foundation setting 3 ft. into the ground mushroomed at the bottom to make a firm support. The walls are 6 inches thick, reinforced horizontally with steel rods each 12 inches and vertically each $2\frac{1}{2}$ ft. The water-proofed bin floors are flat, covered with wood, to utilize for storage the space ordinarily required for hopping the bottoms. The concrete roofs are flat, supported by I beams that cross each other, and are covered with built-up felt and asphalt roofing.

Each tank is filled from the leg head in the elevator thru steel spouting entering the tanks thru their roofs. The tanks drain most of their contents thru similar steel spouting at the junction of the floor and side walls which lead back into the boot of the elevator leg. A man-hole near the bottom of each tank provides entrance for a workman who scoops into the spout the last few hundred bushels. "This scooping," says Mr. Railsback, "costs little, and having the floors flat gives each tank a little more storage room than it would have were the bottoms hopped."

The tanks were built by J. E. Reeser & Son, who supplied the forms and labor, using con-



Storage in Railsback Bros. elevator at Weldon, Ill., increased by Construction of Two Concrete Tanks.

crete and washed gravel provided by Railsback Bros. Steel forms used were supplied by the American Metal Form Co. The concrete was poured a formful at a time, the form being re-set after each pouring. Joints between the formfuls of concrete were made water-tight by inserting a metal shield in the concrete at each joint.

Construction of these tanks is similar to that of concrete farm silos, which, in truth, is the origin of the idea for using this means to expand storage at country elevators. Similar tanks have been erected by other central Illinois elevators, including the farmers elevator companies at Weedman Station, Sibley, Danvers, Broadlands, and Atwood; Carl Jones, at Dewey; Sullivan Grain Co. at Sullivan; Heman Grain Co. at Heman, and Weldon Grain Co. at Weldon. The tanks are built in three different diameters, according to the wishes of the owner, the metal forms used being 14 ft., 22 ft., or 24 ft., in diameter. The tanks may be poured to any desired height.

Mr. Railsback estimates that each tank cost him \$2,500 when completed, or a fraction more than 11c per bushel of storage space. The Government's 4,300 steel tanks cost 9c per bushel plus the cost of transportation, foundation and erection.

Canada may face a new problem. When the grain begins to arrive at the country elevators in volume next September, facilities will be taxed to the limit. It has been rightly suggested that all domestic requirements for next fall should be shipped now. Coal can be ordered and stored at its destination without any serious disruption. The railways should be left clear in the fall months to devote their equipment to moving the grain crop into position and to move war materials that will be required in ever increasing quantities.—McCabe Bros. Grain Co.

Loading Dock Increases Car Loading Capacity for Elevator

D. O. Wanamaker, manager of the Farmers Cooperative Grain Co. at Blue Rapids, Kan., faced a problem. Blessed with a 30 ton Fairbanks dial truck scale, he knew no limit to his ability to weigh accurately truckloads of grain as fast as they could drive across the 34-ft. concrete deck of the scale. But handicapped by a 7,500 bu. elevator that was unable to elevate and load cars as fast as farmers brought in their grain during the harvest rush, he was unable to make full use of these excellent weighing facilities, and extend to his patrons the service to which they were entitled.

The answer to his problem was not simple installation of a larger elevating leg, which would increase his demand power charge thru long seasons when its large capacity would not be needed. His real need, he felt, was ability to load two cars at a time.

With this in mind he erected a loading dock on the side track of the Union Pacific railroad that serves the elevator, locating it far enough from the elevator office for easy maneuvering of trucks over it. A section of the loading dock was hinged at one end. A pneumatic truck lift tips the other end of this section upward to dump all length of trucks into a 75 bu. receiving hopper under the loading dock. Grain drains from this hopper into a blower for loading into a car.

Air for the pneumatic truck lift is piped from the pressure tank in the elevator, which has capacity sufficient to handle this as well as the pneumatic lift in the elevator driveway.

Cars may be loaded thru the blower at the rate of 700 bus. per hour, which Mr. Wanamaker feels is sufficient to relieve the strain on the elevator's loading facilities during the harvest rush.

The Grain Storage Contract of the A A A

by JAMES J. RICK, *vice president,*
Union National Bank, Kansas City, Mo.

When the World War ended I became connected with the old United States Food Administration Grain Corp., serving as cashier, later becoming comptroller of the organization which liquidated this corporation.

The United States Food Administration Grain Corp. was the greatest commercial venture of the United States government. Leading grain men were drafted to operate this venture, which was headed by Julius H. Barnes.

THE RECORD of the U. S. Grain Corp., headed and operated by experienced and capable grain dealers, is far different from the story of the late lamented Farmers National Grain Corp. which met its fate in 1938 and cost the government many millions of dollars. It is concrete proof that a grain company run by grain dealers can make money under conditions similar to those under which a grain company without grain men lost money. I feel qualified to make this statement, because I was not only connected with the U. S. Grain Corp., but I served as treasurer of the Hall-Baker Grain Co. of Kansas City until the time this company was made a branch of the federally financed Farmers National Grain Corp. I served as vice president of the latter for a short time, but I must confess that it would have been difficult for any man with training to have long continued under the conditions that existed in the latter corporation. Sound business practices were discarded immediately, and the branch lost money rapidly along with all self respect.

The Farmers National Grain Corp. was not only financed by the Farm Credit Administration, but it was supervised largely by the Administration. A crew of auditors kept Washington well informed of activities, and no major plan was ever followed without the approval of Washington officials.

The government obtained a large stock of wheat under the Grain Stabilization Corp., which was strictly a government instrument, and stored this wheat so far as possible with the Farmers National Grain Corp., paying the usual tariff for storage (1c per bu. per month, with no free time). In the face of normal storage income the grain corporation went broke. It seems odd to me that the group whose experience with the Farmers National Grain Corp. was so disastrous, now seek to compel private grain elevator operators to store grain for them at a rate of less than half of that formerly paid the Farmers National Grain Corp. How can they expect the grain trade to make money at half the rate for ware-

housing that allowed their government subsidiaries to go broke?

The proposed agreement called a "uniform grain storage agreement," you are asked to sign gives you no assurance that you will receive any business, and it guarantees no minimum earnings for grain placed in store in terminal elevators. There should be some basis of net earning when you allocate to the government some of your storage space.

Under the terms of the agreement state laws would be abrogated if paragraph 30 were enforced. This paragraph states: "That the terms of this agreement shall prevail over the written or printed terms of warehouse receipts representing eligible grain." Some of the states have spent a great deal of time and effort to perfect their warehouse laws in the light of experience.

MOST DAMAGING to the relationships of grain dealers and bankers is failure of the government "agreement" to specify a cut-off date, or an expiration date for storage allowed. This could be most confusing, in that the government could place grain in your elevator in November of 1940 and claim the space for a period of one year from date of deposit. In the meantime your lease might expire. In any case the elevator is tied up for another crop year with no assurance of income thru that crop year.

White Corn Holds Its Premium

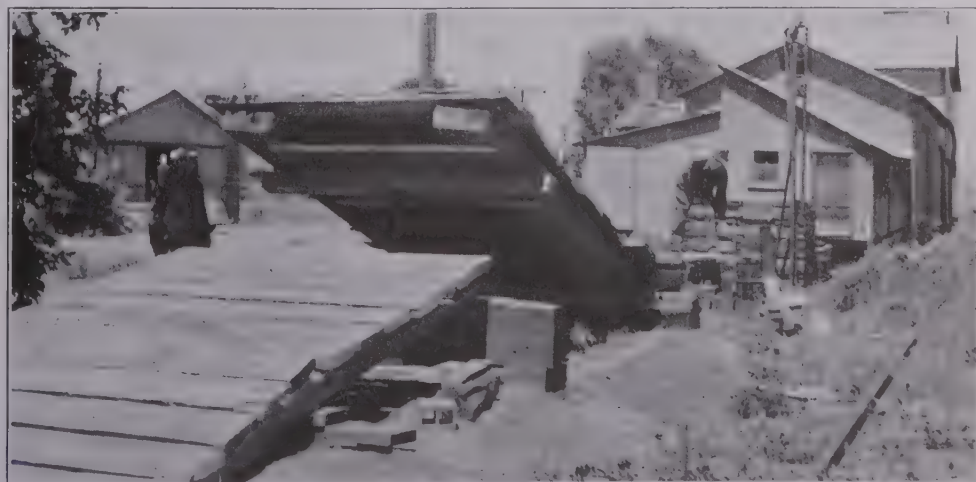
Back in 1933 and the years preceding white and yellow corn sold at about the same price, but in March, 1934, the white variety commanded one cent more than yellow. The premium increased steadily during the summer and fall until by December white corn sold 8 cents per bushel higher than yellow corn.

Under the insistent demand for white corn for brewing and for certain cereal products the premium steadily increased thru the following years.

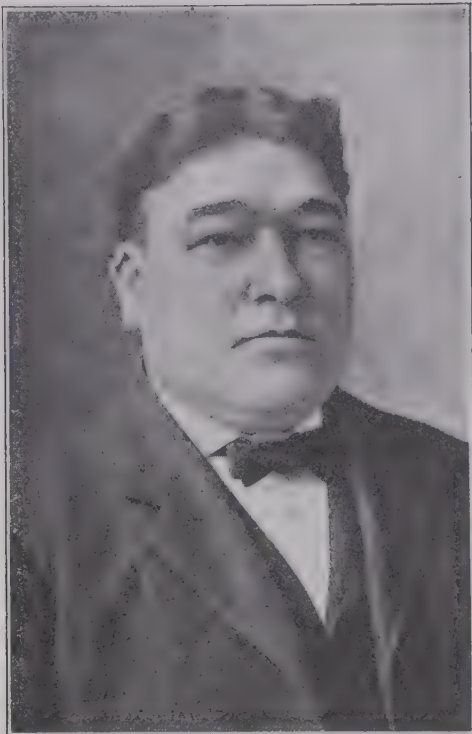
At Chicago, July 20, No. 1 white corn was quoted at 14 cents over July, while No. 1 yellow was quoted at 1½ to 2¾ cents over July. At Milwaukee, also, white corn is in request at 10 to 10½ cents over yellow.

The scarcity of white corn has led the larger cereal manufacturers to consider promoting the planting of the white variety.

The situation has been aggravated by neglect of some of the corn breeders to develop white hybrids.



Mgr. Wanamaker Operating Air-Lift of Loading Dock of Farmers Co-operative Grain Co., at Blue Rapids, Kan.



Wm. F. Logan, Kansas City, Mo., Deceased.

Death of Kansas City Exchange Supervisor

Wm. F. Logan, aged 71, died July 18, at Kansas City, Mo., where he had been supervisor for 14 years for the Grain Futures Administration and the Commodity Exchange Administration, until his retirement Apr. 30.

Before entering the government service in 1918 at Chicago he had practical experience in the grain business with brokerage firms in Topeka, Wichita and Chicago.

Well Equipped Country Elevator

The new elevator of the Hale Grain Co., at Royal, Ia., is better equipped than the average country elevator. The company has another elevator and feed mill in the same town, in the good farming territory of Northwestern Iowa on the C., R. I. & P. R. R.

The new elevator stands 75 ft. high on a reinforced concrete foundation. On the ground it is 30x33 ft., of studded construction, with a T-shaped work floor.

The 16 bins have a capacity of 40,000 bus. Four are pocket bins, 7 are hoppers bins over work floor and 5 are hoppers bins at side of work floor. The hoppers bins are fitted with 8-in. turnheads. The enclosed driveway is 14 ft. wide, with special R-W folding doors. The air compressor controlling the Strong-Scott Dump is driven by a 2-h.p. motor which also operates a screw conveyor.

Elevation is effected by one leg of 4,000 bus. capacity, having 10x6 Calumet Cups 7 in. centers on 5-ply 11-in. rubber belt, driven by totally inclosed ball bearing 10-h.p. motor thru a Winter Gear at head. A 10-in., 18-duct radial Gerber Distributor distributes the grain. The shipping spout is of 8-in. well casing, and grain is weighed out on a 10-bu. Richardson Automatic Scale.

Railroad cars can be unloaded at this elevator by scooping out of car by shovel into a hopper, from which a 9-in. screw conveyor leads to elevator boot.

The machinery includes a Hart-Carter Cleaner driven by 3-h.p. motor, and a Superior Needle Machine driven by a 1-h.p. motor.

A metal covered warehouse, 30x40 ft., for

seeds and feeds, adjoins the elevator, on a concrete foundation, and has a loading deck for loading wagons and trucks. The plant was designed and built by T. E. Ibberson Co.

Gypsy Traders Need Regulation

By E. N. SUNDERLAND, executive sec'y, Associated Producers & Distributors

The problem of the itinerant trucker-peddler is old, so old in fact, that in some cases I find a condition of apathy or indifference, sort of a let-down feeling, as tho the grain dealers have come to the conclusion that the destructiveness of this unregulated competitor is to be with us from now on. Such is not the case. My purpose is to tell you of a new set-up, an arrangement by which passage of relief legislation is more assured.

Obviously, the first solution, which would be reduction of your taxes and responsibilities to the level of the unhampered gypsy's, will not be considered. Consequently, there is only one thing to do; that is to get a law enacted in the next session of your legislature for the proper regulation and taxing of the itinerant peddlers.

In past attempts to secure relief legislation, we have waited too long. We have waited until the legislature was in session, then have introduced a bill, which reached the legislators together with six or seven hundred other bills from numerous sources. In far too many cases the individual legislators had not been approached at all, or in a haphazard way, by their local constituents concerning the need for this proposed legislation. Small wonder it met with little success.

This year we started in Kansas far in advance of the convening of the legislature, strongly fortified with a state-wide advisory com'te headed by well-known and successful farm leaders. Mr. Edward Gall, manager of the Offerle Cooperative Grain & Supply Co., is the chairman, with W. O. Sand, sec'y of the Kansas Farmers Cooperative Ass'n as vice-chairman. Membership of the com'te is made up of leading representatives of all commodity trades such as grain, hay, feed, seeds, coal, fruit and vegetables, lumber, groceries, hardware and implements, etc.

Under the direction of this state com'te, I have been instructed to go into each county of the state and organize a small, representative com'te of county business leaders whose primary duty will be to hold a meeting with the county's candidates for the legislature. The com'te will fully acquaint these candidates with the problem of the itinerant-peddler, explain who and what he is, how he operates to the detriment of the established and tax-paying business men and what can and should be done to nullify these destructive practices. It is not the intent to act in a coercive manner, nor try to "pin" the candidates down to a definite promise, but merely to act in an educational manner. The great majority of the legislators, when approached in this way, will feel obligated to respond affirmatively when a regulatory measure is introduced. They will remember that this matter has been brought to their attention by business leaders in their home communities and counties. They will be in a receptive mood.

If our program is followed in each county the atmosphere will be decidedly changed when the time comes to introduce the bill.

Promoting Friendly Relations with Patrons

Miles Gooding, the enterprising manager of the Farmers Grain & Coal Co., at Frankton, Ind., demonstrates his feed by growing frying chickens in the basement of his store.

The farmers' wives look over the chickens and decide to use the same kind of feed for their flocks.

The annual chicken supper to which his customers are invited has done much to popularize his business.

For the past four years he has invited each customer with his wife or best girl friend. Last year he sent out 1,300 invitations. He reports his customers have increased from 250 to 650 in the four years.

The party this year cost \$325. No advertising of any nature is done at the suppers, and, Gooding says, "it is very remarkable how sociable all are and they sure seem to enjoy themselves."

A charge of 7 cents per cwt. is made for



The 40,000-bu. elevator and warehouse of the Hale Grain Co., Royal, Ia.

grinding and mixing at the company's elevator, and in four years the receipts have increased from \$3,000 to \$8,000, and the men employed have increased from 6 to 10.

Grain Trade Has Highest Percentage of Accurate Scales

Shown for the first time at the Annual Conference on Weights and Measures held recently in Washington under the auspices of the National Bureau of Standards, a film about motor truck scales is now available for trade groups and other interested parties.

The film, divided into two main sections, presents in the first part a pictorial discussion, supplemented by a running commentary, of the recommendations of the National Bureau of Standards with regard to the selection, installation and maintenance of motor truck scales. All of the pertinent points to be considered in connection with these important factors are delineated with detailed advice, offered in a graphic and understandable way.

Dealing with the actual work performed by weights and measures officials throughout the country in their vigorous efforts to increase the efficiency of scales used in weighing heavy trucks, the second section of the film devotes itself to a statistical report of the results compiled by local, state and county weight inspectors of their investigations.

A noteworthy fact brought out in the film demonstrated that scale owners profit by the educational advice given by officials. In the instances where comparative figures were available, it was shown that the percentage of inaccurate scales was markedly and progressively smaller on second and third inspection tours than it was on the initial test survey.

To quote an example, in one state where 2,500 vehicle scales were checked, the first year's test showed 47 per cent were inaccurate, the second test 20 per cent and the third 8 per cent.

Seventy-two per cent of the motor vehicle scales tested throughout the country by the National Bureau of Standards, in cooperation with State weights and measures officials, were found to be inaccurate, it was revealed in a report made by Ralph W. Smith, National Bureau of Standards, at the Thirtieth National Conference on Weights and Measures.

The report, which is the fourth in a series begun in 1937, covered the period from November, 1936, to April, 1940, and lists the results compiled of 2,161 scale inspections made in thirty states and two large cities.

Two main types of vehicle scales were inspected—wagon scales and motor truck scales, and the results classified according to these types and also on the basis of ownership or use. Wagon scales were found to have the largest percentage of errors, 81.1 being inaccurate. Sixty-seven per cent of the motor truck scales examined were found to be defective. The total number of inaccurate scales was 1,557, or 72% of 2,161.

Where the scales were used for a particular purpose, the report showed that the two groups having the most errors were the scrap material group and the building material group. More than eight out of ten scales were found to be inaccurate in each one. The highest percentage of accurate scales was in the grain industry.

Improvement in Fertilizer

By EARL JONES, Extension Agronomist, Ohio State Univ., before Ohio Grain, Mill and Feed Dealers Ass'n

Surveys indicate that some 70% of the farmers ask the local dealer for recommendations concerning analyses, rates and methods of application of fertilizers. The County Extension Agents have the latest recommendations of the Experiment Station and the Extension Service.

All local dealers should have: (1) Handbook of Experiments in Agronomy, published by the Ohio Agricultural Experiment Station; and (2) Fertilizing Field Crops in Ohio, published by the Extension Service of the College of Agriculture.

Maintaining soil productivity involves, in addition to supplying the nutrient elements in fertilizers, the plowing under of good sods of clover, alfalfa or sweet clover, or mixtures, in a good rotation. This is necessary for the maintenance of the organic matter and nitrogen content of the soil, good tilth and erosion control.

The large number of analyses manufactured increased the cost of producing fertilizers and confused the farmer. In 1922 the Agronomy Departments of the College of Agriculture and the Experiment Station cooperated with the industry in establishing a short list of recommended analyses, believed to meet the needs of Ohio soils.

This list was revised in 1928, 1937, and again in 1940. At the last two revisions a list of analyses of Ohio, Michigan and Indiana was developed. The number of analyses on the market has decreased and from year to year a larger proportion of the analyses sold have belonged to the recommended list.

High analyses fertilizers are commonly sold at a lower cost per unit of plant food than ordinary fertilizers and there is less labor in hauling and spreading. Experimental work indicates that they are equal to low analyses when equivalent applications are made. The machinery used must satisfactorily apply the smaller application of high analysis fertilizers.

Since 1929 the State Department of Agriculture has refused to license mixed fertilizers containing less than 16% plant food.

Total plant food content of fertilizers in 1934 was 19.3% in Ohio and 18.2% in the United States.

NEUTRAL FERTILIZERS—The use of superphosphate does not increase soil acidity. Ammonium sulfate, ammonium phosphate, and to a lesser extent organic materials, such as urea and cottonseed meal, have this tendency. The continued use of these materials has produced unfavorable effects on crops on lime-deficient, sandy soils in the south and east, when heavy applications of fertilizers are made. This is not a serious problem in Ohio where small applications containing little nitrogen are made on field crops, but it may become a problem with liberal applications on potatoes and horticultural crops. Soil acidity is due largely to removal of limestone by leaching and crop removal.

Neutral fertilizers are made by using more basis carriers or by adding dolomitic limestone to the fertilizer. Their use will not help solve the soil acidity problem because of the small applications of fertilizer on field crops. On soils containing lime these fertilizers may be less efficient because of decreased availability of phosphorus.

An Elevator Manager's Odd Sideline

H. A. Waite, local manager of the 18,000 bu. Shellabarger Mill & Elevator Co. elevator at Bennington, Kan., has an odd sideline.

Waite's personal sideline and hobby is the watch, clock and jewelry repair business. It started about 15 years ago, when Bennington's only jeweler died, and the young fellow who succeeded him decided Bennington had less need for a jeweler than he had for brighter pastures.

The deceased jeweler's customers remembered that Waite was handy at fixing clocks, so one after another they brought him clocks and watches to be put back in running order. Soon the volume of business along this line outgrew the pliers and hairpin stage, and the complications of repair work demanded better facilities.

Waite invested in some of the jeweler's tools left behind in lieu of rent by the young fellow seeking greener pastures. Then he invested in a mail order course in watch repairing.

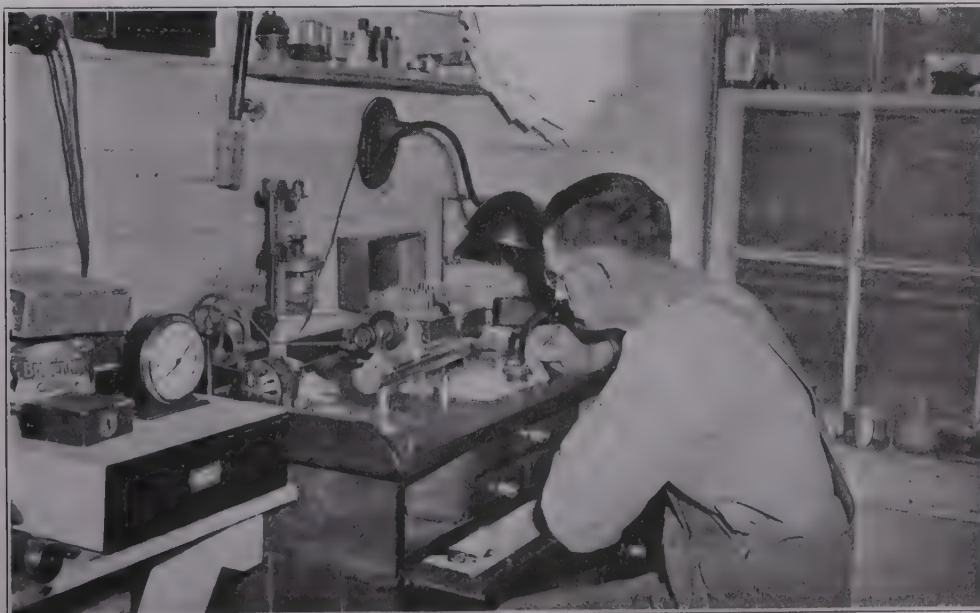
Today, Waite has a full-fledged jewelry repair stand, with lathe, tweezers, tiny screwdrivers, and a multiplicity of special tools, in one corner of the elevator office. When the grain business is slow, and when calls for feeds, concentrates, and flour are infrequent, he busies himself with fixing the watches and clocks that folks around Bennington bring in for repairs.

Most of the jewelry work is local, but a fair amount comes in by mail, or is brought to Waite from larger towns where folks have heard of his prowess at fixing things.

"Longest way from home any of my repair work has gone," says Waite, "is China. The lady who owned the watch was in this country when she left it for repair. But after the watch was fixed it had to catch up with her in China."

Waite has been associated with the Shellabarger Mill & Elevator Co. for 28 years. He has worked at numerous stations and in various capacities. For more than 15 years he has been located at Bennington, where he owns his home, and where wheat in the Solomon river valley always makes a good crop.

In spite of his handiness at fixing jewelry, Waite says his first love is still the grain business, and he drops his tools without hesitation when a patron of the elevator appears.



H. A. Waite, Local Manager, Bennington, Kans., Repairs Clocks in Spare Time.

Loading Your Grain Into Leaking Box Cars

By J. A. SCHMITZ

Chicago Board of Trade Weighmaster

As harvest time approaches we receive requests for specific information regarding the proper method to cooper cars to be loaded with bulk grain. Changes in management often bring new men into the elevator and these requests generally come from men who feel the need for information relative to the important task of preparing cars for bulk grain loading. Some of the more pertinent items that must be taken into account when selecting and cooping cars for grain follow:

During the years 1938 and 1939 approximately two out of every three cars reported leaking by the Chicago Board of Trade Weighing Department were leaking through, around, or over the grain doors. A decade or so ago the preponderance of the leaks recorded each year were car box leaks. This reversal indicates that the preparation of cars for grain loading has not kept pace with the improvement in the design and construction of box cars. It shows a need for more care in cooping as well as in selecting. Now, in order to reduce leakage to the minimum, the shipper before he loads grain into a car must first inspect it thoroughly inside and outside to determine its fitness as a safe grain carrier. The following conditions make cars unsuitable or unsafe for bulk grain loading:

- (1) Cars with inside saturated with oil, manure, fertilizer, creosote, or other unclean or stench making substances. (Note—Objectionable odors cause loss of grade and often bring heavy discounts.)
- (2) Cars with end posts, side posts, or door posts loose or broken out at the bottom.
- (3) Cars with leaky roofs.
- (4) Cars where end or side linings are so

constructed that grain which leaks behind them is not easily recoverable.

OUTSIDE INSPECTION should include an examination of (a) sheathings at sides and ends of cars to ascertain if they are securely fastened to the sills; (b) sheathings at junction of end posts and of side posts and of corner posts to insure that there are no cracks at these points through which grain may leak. If such cracks are found, they should be securely calked from the outside of the car and such calking secured in place by strips of board or other means. (Note—Door posts, if loose at floor or if broken, are, of course, definite reasons for rejecting cars.)

"INSIDE INSPECTION" (a) Carefully examine the floor boards for cracks through which grain may leak. Where such cracks are found, calk or cover them. (b) Examine ends of the floor boards at junction of body brace over the bolster blocks. If the floor boards are found loose or short at this point, fill or cover the cracks caused thereby. (c) Examine floor at junction of last floor board and end sill at both ends of the car for cracks through which grain may leak. Securely calk any such cracks or cover them with adequate pads properly fastened in place.

"INSTALLING GRAIN DOORS" (a) See that the barricade is strong enough to resist the pressure of the grain. (The point of greatest pressure against the grain door barricade is about $\frac{1}{3}$ of the height of the grain from the floor.) (b) See that the joints between the floor and lowest grain door are grain tight and cover any cracks between grain doors where grain may leak out. (c) Apply pads on the face of the door posts to assure tight joints between grain doors and door posts. (d) Apply any needed grain door reinforcements horizontally and in such a manner that reinforcements will cover the joints between the doors. Nail such reinforcements along their upper edges only. (e) Do not use spikes to fasten grain doors to posts.

Institute of Fair Competition Organized

In the interest of shippers and receivers of grain, grain products, manufactured feed and feed ingredients there was formed at the Brown Hotel, Louisville, Ky., June 12, the "Institute for Fair Competition," having as its objectives the rail movement of freight traffic, and the general commercial welfare of its subscribers, by discouragement of any form of freight transportation subsidy, requiring that water, motor truck and rail transportation shall be required to maintain itself, dissemination of educational information and procuring co-operation of existing organizations.

Its activities are under the control of a general advisory and policy board.

Its organization was the outgrowth of correspondence between grain operators and millers located at Knoxville, Tenn., Nashville, Tenn., Cairo, Ill., Indianapolis, Ind., Louisville, Ky., Hopkinsville, Ky., Evansville, Ind., Columbus, O., Cincinnati, O., and other points concerning the serious effect of water transportation on their business. This correspondence and telephone conversations were carried on not only between the grain elevator operators who are located at the points named, but extended to country shippers and receivers thruout C.F.A., Illinois and Southern territories.

A resolution was adopted at the last annual meeting of the Ohio Grain, Mill & Feed Dealers Ass'n urging members to subscribe to and support the activities of the Institute.

A conference with a representative of the Ass'n of American Railroads has been scheduled to be held at Cincinnati and J. J. Pelley, pres. of the Ass'n has expressed his hearty approval of the purposes of the Institute.

The temporary officers selected are O. B. Hastings, Cairo, Ill.; treas., to whom subscriptions may be sent, Dom J. Schuh, Cincinnati, O., manager, and Harry A. Volz, Louisville, Ky., chairman.

Checks Bin Temperatures

Fred Marquardt, owner-manager of the two elevators of the Marquardt Grain Co. at Avoca, Neb., has an agreement with the Commodity Credit Corp. to store wheat and corn of local farmers, who put up grain as collateral for government loans. He felt the need of a simple system for checking the temperatures of grain in bins. His elevators are cribbed country houses. The bins are not deep when compared with the tall tanks of a terminal elevator, or the deep bins of the new type reinforced concrete elevator now frequently seen at country stations. What Mr. Marquardt needed was some means of poking a thermometer down into the grain in his bins to learn if it was staying cool or not.

Eventually he found a suitable thermometer being manufactured by the Eagle Manufacturing Co. He paid \$5 for a brass-encased, pointed tip instrument with an open side to expose the reading scale of a thermometer.

This 8-inch unit is threaded at one end to screw into the couplings for common $\frac{3}{4}$ th inch pipe. With several lengths of pipe he is able to thrust the thermometer down from the top into a bin of grain for distances as great as 20 ft. or more to reach chosen spots.

Similarly he can thrust the instrument into the grain near the bottom thru the manholes or drains that are built into the bins. The only objection he has to the instrument is that it takes about 20 minutes to get a reading.

At Seward, Neb., temperatures of grain in a large steel tank of the Imig-Schneebeck Grain Co. are taken by a brass inclosed thermometer thrust thru the walls of the tank at 6-ft. intervals thru openings having 1-in. pipe projecting and closed by caps screwed on to keep out rainwater.



Carl A. Schneebeck Removing Cap from Pipe Admitting Thermometer into Grain Tank at Seward, Neb.

Prefabricated Elevator Erected in Kansas

W. R. Bullen's new 10,000 bu. studded and iron-clad elevator on the Union Pacific railroad at Lindsey, Kan., was partially prefabricated before it was erected this spring.

The old elevator was set fire last September when an oil transport truck, carrying 4,000 gallons of gasoline, struck a freight engine on the nearby crossing of the Union Pacific at Lindsey and burst into flame a few feet from the elevator. The fire had hardly died out before Mr. Bullen decided on rebuilding the elevator.

When the bulk of the wheat movement thru Mr. Bullen's elevators at Ada, Brewer, and Minneapolis, Kan., was over last fall, Mr. Bullen and his son-in-law, Jess Barker, rebuilt the foundation of the elevator at Lindsey, preparatory to reconstruction.

Thru the long winter months in a warehouse at Minneapolis, Bullen and Barker worked at building 9x4½ ft. rectangles of 2x6s, braced at one foot intervals with 4½ ft. studs of 2x6s. The plan was to tie these sections together with 2x6 plates to create the framework of the elevator, and for this purpose they drilled holes thru 18 ft. and 26 ft. lengths of 2x6 plates to carry the ⅝ths inch rods to brace the structure and its bins.

This plan was followed in erection. Laid first on the 26x18 ft. foundation was a sill of 2x6s. To this sill was spiked the 9 ft. long sections that were prefabricated to form four 9x9 ft. bins, separated at right angles to the driveway by an 8 ft. wide workfloor. The 4½ ft. high sections were then tied together across their tops by other 2x6 plates, thru which rods were run to cross the bins and tie the structure together.



Prefabricated Studded Elevator of W. R. Bullen at Lindsey, Kan.

Repetition of this process raised the bin height to 35 ft. above the ground. Over the bins was raised a 22 ft. cupola. Attached to one side was a 12 ft. wide shed type driveway, with a good grate over a single large receiving pit.



Interior View of Bin in W. R. Bullen's Elevator Showing Sections Tied Together with 2x6-inch Plates.

When the framework was completed, and the tie rods countersunk in the outside 2x6 anchoring plates, the entire structure was sheathed and smoothly covered with sheet steel, its roof sections bonded to the side sheets to make bird-proof eaves. A fifth bin was created by putting a hopper bottom in a section over the workfloor between the leg well and the outside of the structure, bringing the total capacity of the structure to 10,000 bus.

Fast handling machinery is a feature of this unique elevator. Its single large receiving pit is drained by a rapidly moving leg belt carrying Calumet buckets and run by a 7½ h. p. motor thru an Ehrsam head drive to elevate 3,500 bus. of grain per hour. A manlift speeds passage for the elevator man from the work floor to the cupola. A truck lift in the driveway quickly dumps huge truckloads of grain into the receiving pit.

A small office is located a short distance from the elevator, where trucks for unloading, and trucks already unloaded interfere little with each other in passing across the deck of a 20 ton Howe truck scale.

Located but a few miles from Minneapolis, the new elevator is kept open only a few months of each year to accommodate the harvest rush.

The flour subsidy was extended July 16 to Central and South America and adjacent islands lying west of 40 degrees west longitude described as "the Americas."

N. E. Indiana Dealers Report New Wheat Grading High

BY L. R. RUMSYRE

Cooperating with the Indiana Grain Dealers Ass'n a meeting of the N. E. Indiana Hay & Grain Ass'n was held in the Chamber of Commerce Building, Fort Wayne, Monday evening, July 15, President Avon Burk, Decatur, presiding.

A large number of local dealers, their assistants and terminal representatives were present and spoke freely on the various problems encountered in the marketing of new wheat.

Fred K. Sale, Secretary of the Indiana Grain Dealers Ass'n, led the discussions and explained how to handle wheat for farmers who desired to put their wheat in local or terminal warehouses for storage to be marketed through the Ever Normal Granary Plan.

A motion by Mr. Walter Penrod, South Whitley, seconded by Mr. Royal Clapp, Columbia City, to place the Northeastern Indiana Hay & Grain Dealers Ass'n on record as recommending a charge of not less than 4 cents per bushel to cover the services of receiving, grading and loading out the wheat was carried.

Toledo, Indianapolis and Bryan terminal receivers present reported on the conditions as they found them thru their respective trading areas. Some wheat was reported to be moving from combines by a few of the local dealers. The grade was considered very high. Testing from 57 to 61 lbs. per bushel. No one reported on the number of bushels per acre but it was thought many fields would run 25 to 30 bushels.

Kansas Elevators May Store Loan Barley

In addition to warehouses in California, Oklahoma and Texas, as originally provided, farmers have been given the privilege of storing loan barley in Kansas elevators.

The loan rate on barley in public warehouses is: No. 1, 28c; No. 2, 27c; No. 3, 25c; No. 4, 22c and No. 5, 18c per bushel.

These loan values are subject to a discount of 2c per bushel for mixed barley.

Grain Carriers

The Illinois Central has ordered 3,000 box cars for delivery before Jan. 1.

Grain and grain products were loaded into 47,586 cars during the week ending July 6, against 53,485 cars during the like week of 1939 as reported by the Ass'n of American Railroads.

Demurrage at \$1.20 per day will be assessed under Supplement No. 4 to Jones' I. C. C. No. 3353 when employes of consignor or consignee are on strike. No penalty accrues. The tariff is effective Aug. 1 and is in the form devised by the Ass'n of American Railroads.

The Kansas Corporation Commission has authorized a reduction of 1c per 100 lbs. in the rate on grain to the Missouri River from the following Kansas points: *On the Union Pacific*: Emmett, Aikins, Onaga, St. Mary, Bellevue and Wamego. *On the Rock Island*: Maple Hill, Vera, Paxico, McFarland and Wabunsee. *On the Santa Fe*: Agricola, Waverly, Halls Summit, Madison, Hill Top, Virgil, Quincy, Bisbee and Hamilton.

In the last eight year period the railroad industry has paid about \$2,350,000,000 in taxes into public treasuries. In that same eight year period more than twice that sum has been paid out from public treasuries to develop and support other transportation competitive with the railroads, in addition to all the payments these other forms of transportation have made into public treasuries thru taxes of all kinds. Highway construction and maintenance costs alone, in that eight year period, over and above all the taxes of all kinds paid by motor vehicles of all classes, have been upwards of \$3,750,000,000, according to the recent post-mortem report of the Federal Co-ordinator of Transportation.—Z. G. Hopkins, of Western Railways Com'te on Public Relations.

Chicago, Ill.—A hearing will be held July 25 by the Central Freight Ass'n on a proposal to reduce to 6 cents the rate on grain from Northwestern Indiana to Chicago. To conform to the 6-cent proposed rate to Chicago, it is necessary to reduce the thru rates to eastern trunk line territory (Buffalo, Pittsburgh and east) from Chicago locally and intermediate points in Indiana and Michigan. From Chicago locally the reductions would be as follows: To New York, N. Y., domestic grain, from 34½ to 32 cents; grain products, from 35 to 32½ cents. To Buffalo, N. Y.: grain, from 28½ to 26 cents; grain products, from 29 to 26½ cents. The Toledo Board of Trade will oppose the proposal un-

Clean Out Rule for Steel Bins

The Illinois Central in Supp. No. 15 to 1537-K on minimum weights effective July 30 extends the clean out rule to steel bins as follows:

Note 6:—Clean Out Rule.—Once during each calendar year for the purpose of cleaning out elevators and grain houses, one carload of soya beans and one carload of each kind of grain or seeds may be shipped, subject to minimum carload weight of 30,000 pounds per car, from each elevator or grain house served directly by the rails of carrier. (See Exception.) (Shipments as provided in this rule are subject to the provisions of Note 1, Item 320 of WTL Tariff, 330-F, Agent L. E. Kipp's ICC No. A-3158.) (GR-262-438.)

Exception.—The provisions of Note 6 will also apply on corn stored in steel storage bins located on or adjacent to railroad property and only when loaded into cars through elevators or grain houses. The steel storage bins so located at each station will be considered as a unit. The provisions of this exception will expire with Dec. 31, 1940. (GR-3233.)

less grain rates from Toledo are reduced correspondingly, Clare Tefft, transportation commissioner, presenting the objection.

Tom R. Douglas, administrative assistant, Missouri Department of Agriculture, tells of a Springfield grain dealer who paid for 600 pounds of water in a load of soaked Iowa corn that he bought from an itinerant. This despite the fact that Missouri merchants have been repeatedly warned of such swindles. Mr. Douglas says the state is in bad need of adequate laws to protect grain dealers from the crooks among gypsy peddlers. Such protection is one of the main purposes of the itinerant merchant legislation sponsored by the Associated Producers and Distributors.

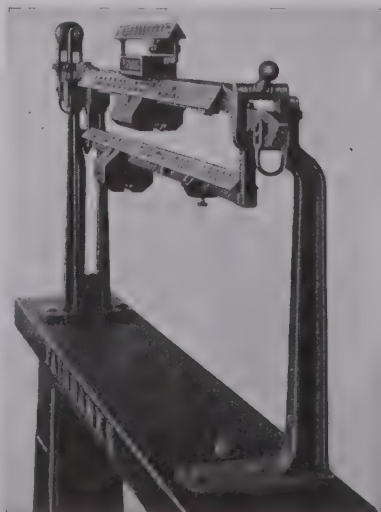
Accurate Weighing Made Easier

The full capacity beam recently announced by Fairbanks-Morse makes accurate weighing of motor trucks much faster and easier than ever before.

All graduated face plates are set at an angle of 45 degrees which eliminates "hunchback" weighing and permits a tall or short person to read from a natural standing position. These plates are made of aluminum and have large black etched-in figures. These are easy to read and reduce eye strain to a minimum.

All poises are center indicating, of the open face type which do not cover nor obstruct graduated face plates. Main poise and main tare poise have stainless steel roller bearings which run on a machined track to provide fast and accurate operation. The main poise and main tare poise are both equipped with positive seating stainless steel poise dogs located in the middle of the poises and operating in a vertical plane from convenient finger-form side handles. The poise dogs engage in 90 degree notches which are accurately machined on the underside of the beams. Definite location of poise dogs in center of notches is assured—wear on the notches is reduced and overall accuracy of the beam is prolonged. By locating the notches on the bottom of the bars dirt cannot accumulate in them and affect the accuracy of the poise setting. The poises respond to feather-weight touch. They run smoothly and quietly and do not tire a person from continuous manipulation. When the beam is balanced it is read easily because the decimal reading face plates on the new Fairbanks beam reduce mental calculation to a minimum.

The new beam is available with or without tare-bar. All working parts are scientifically heat treated to insure precision fit and continued accuracy. The entire beam, except the aluminum face plates, is finished in slate gray, durable crackle enamel.



Full Capacity Beam for Motor Truck Scales.

Receiving Books For Grain Buyers

Farmer's Deliveries. A convenient form for recording loads of grain received from farmers. Tare weight is entered immediately under gross to facilitate subtraction. Two hundred pages of linen ledger paper, ruled 20 lines to a page, thus accommodating 4,000 loads. Well bound in cloth, with keratol back and corners. Order Form 380. Weight 2¾ lbs. Price \$2.50, plus postage.

Receiving and Stock Book for keeping a record of each kind of grain received in separate columns, so buyer may easily determine total amount of any grain on hand. Size 9¼x11½, 200 pages, with a capacity for 4000 loads. Well printed on linen ledger paper, bound in cloth with keratol back and corners. Order Form 321. Weight 2¾ lbs. Price \$2.50, plus postage.

Grain Scale Book, a combined Journal and Receiving book. Each man's grain is entered on his own page. Both debits and credits are posted to the ledger. Contains 252 numbered pages and 28 page index, size 10½x15½ inches, will accommodate 10,332 loads. Printed on linen ledger, bound in extra heavy black cloth covers, with keratol back and corners. Weight 5 lbs. Order Form 23. Price \$4.00, plus postage.

Grain Receiving Register is designed for recording the receipts of farmers' grain. Loads may be entered in consecutive order, or different sections of the book may be devoted to different kinds of grain. Book contains 200 pages of linen ledger paper, size 8½x14 inches, each of which is ruled for 41 entries, giving a total capacity of 8200 wagon loads. Well printed and substantially bound in full canvas. Weight 3 lbs. Order Form 12AA. Price \$2.55, plus postage.

Duplicating Receiving Book, designed to facilitate the recording of loads received from farmers. Book contains 225 leaves, size 12x12 inches with 33 lines each, perforated down the middle; the inside half of the leaf remains in the book, and the outer half with the same ruling printed on the reverse side, folds back over the inside half with carbon between. It may also be used by line agents in making daily reports. Check bound with canvas back, nine sheets of carbon. Weight 4½ lbs. Order Form 66. Price \$2.60, plus postage.

Grain Receiving Ledger, may be used first as a Stock Book by posting the receipts daily, weekly or monthly from some other portion of this book, or from any other scale book, giving a page to the grain handled; Second, as a patrons' ledger, by giving a full or half page to each patron; Third, pages may be used to enter each load of grain received in consecutive order under their respective headings. Contains 200 numbered pages with 44 lines to page, and a 28-page index, size 8½x13½, ruled with the usual column headings, including Debit and Credit columns. Printed on linen ledger paper and well bound in black cloth sides with keratol back and corners. Weight 2¾ lbs. Order Form 43. Price \$3.00, plus postage.

Form 43XX contains 428 pages same paper and ruling as Form 43. Weight 4½ lbs. Price \$5.00, plus postage.

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Grain and Feed Trade News

Reports of new elevators, feed mills, improvements; changes in firms; fires, casualties, accidents and deaths are solicited.

ARIZONA

Flagstaff, Ariz.—The Juab County Mill & Elevator Co. of Nephi, Utah, is erecting a warehouse here, to be used as a center for distribution of the company's flour thruout Arizona.

ARKANSAS

Morrilton, Ark.—M. Weaver, former owner and operator of roller mills at Clinton and Shirley, Ark., has opened the Roller Corn Mill here. He expects to manufacture corn meal, chops and bran, and will have a capacity of 150 bbls. per day. The products will be marketed as the Petit Jean brand.—J. H. G.

CALIFORNIA

Orange Cove, Cal.—G. W. Humason, poultryman, has opened a feed and grain store in the Sheridan building. He will make available a special feed of his own which is being prepared thru another mill.

San Diego, Cal.—Bruce Thompson and Lloyd Carr are operating a new feed manufacturing plant here on National Ave. All types of turkey, poultry and dairy feeds are being handled and milling and mixing of feeds. Their trade name is Thompson's Triple X Feed.

Los Angeles, Cal.—M. D. Thiebaud retired from his position as sec'y-manager of the Los Angeles Grain Exchange on July 1, after 21 years in that capacity. C. G. White, who has been traffic manager for the exchange for the past 19 years, took over the duties.

Los Angeles, Cal.—Purchase of the Globe Grain & Milling Co. by Pillsbury Flour Mills Co. was approved by stockholders of the California company at a recent meeting. The stated price was \$3,600,000 for all property assets, cash and outstanding accounts. Philip W. Pillsbury, president of Pillsbury Flour Mills Co., stated in Minneapolis July 17.

CANADA

Ottawa, Ont.—Trade Minister MacKinnon announced July 20 that the Canadian wheat board had fixed the initial price they will pay for No. 1 grades of Ontario winter wheat at 70 cents per bu. for the 1940-41 crop year, basis Montreal export freight rates. This is unchanged from the 1939-40 crop year. Prices of other grades will be fixed shortly.

Winnipeg, Man.—Canada's Board of Grain Commissioners was urged to continue the present schedule of elevator charges for the crop year which opens Aug. 1, 1940, in a meeting held recently with representatives of Dominion elevator interests. George W. P. Heffelfinger, appearing on behalf of the Northwest Line Elevators, Ass'n, in support of the plea for continuation of the present charges, submitted a brief in which he showed storage earnings. Mr. Heffelfinger said: "We selected 14 representative companies among our members, operating approximately 2,865 country elevators, with a total rated capacity of 96,300,000 bus. and 10 terminals at Fort William and Port Arthur with a rated capacity of 49,000,000 bus. We have secured from these companies a statement of their total storage earned from the Canadian wheat board between Aug. 1, 1939, and May 31, 1940. In the case of the country elevators these storage earnings amount to 2.66c per bushel on board wheat and in the case of the terminal elevators the total storage earnings from all sources amounts to 1.402c per bushel." Request for a cleaning tariff on feed grades of barley and oats where these grains contain dockage was made also.

St. Boniface, Man.—Plans for construction of a 300,000-bu. storage annex addition to the elevator at the flour mill of western Canada Flour Mills Co., Ltd., have been prepared by the C. D. Howe Co., Ltd., and tenders have been invited from construction companies.

Fort William, Ont.—The British American Elevator Co., Ltd., operating 125 elevators; the National Elevator Co., Ltd., with 121 elevators; the Northern Elevator Co., Ltd., with 156 elevators, and the Grand Trunk Pacific Elevator Co., Ltd., with the storage space at the Canadian lake-head, have reorganized under the name of the National Grain Co., Ltd., G. W. P. Heffelfinger, vice president of the existing companies, announced. R. R. Emerson will be general manager in charge of country elevators and W. Slater, assistant manager, in charge of terminal operations. The 402 elevators under the company's control are located in practically all sections of western Canada and terminal facilities for 5,750,000 bus. of grain at Fort William. Operations will begin as from Aug. 1, this year.

Ottawa, Ont.—Pool directors lack the cash to invest in an insurance company. R. H. Milliken, Regina, solicitor for the pools, told the banking and commerce committee of commons July 11 when he discussed with members of the committee the purposes of the bill which would give the pool insurance limited, already in operation in Manitoba, a Dominion charter. The bill as drawn makes an exception to the general insurance rule that directors must "own in their own right" share to the amount of \$2,500. In the case of the proposed company, directors' shares would be owned by the pools. Some apprehension was expressed lest ownership of shares should pass from the hands of the pools to outside individuals or companies and the committee adjourned to permit consideration of a clause which would prevent such a contingency. Milliken said the only reason the company asked a Dominion charter was because the chairman of the board of grain commissioners has asked for inspection by G. D. Finlayson, Dominion superintendent of insurance, who was not authorized to inspect a company without a charter. The pool insurance company is sponsored by the three western wheat pools in Alberta, Saskatchewan and Manitoba.

COLORADO

Watkins, Colo.—Tom Nellis has been appointed manager of the Denver Elevator which has been opened for business.

Bristol, Colo.—The Bristol Elevator opened for business July 5, under management of the Romer Mercantile Co., whose head office is at Holly. Both wheat and barley will be purchased.

Yuma, Colo.—William Hart is the new manager of the Hart-Bartlett-Sturtevant Grain Co. elevator, succeeding Jeff Rice who resigned several weeks ago. J. H. Smith, manager of the company's elevator at Schramm had been in charge temporarily at the local house prior to Mr. Hart's appointment.

Limon, Colo.—The Robinson Grain Co. elevator is operating under the management of Harve Meredith, employed in the elevator for many years. He succeeds R. H. Baldwin who had operated the plant for some time. The Robinson Grain Co. recently was reorganized as announced in a previous issue of the Journals.

ILLINOIS

Pontiac, Ill.—H. D. Sargent recently opened a feed mill here.

Atterberry, Ill.—Lightning did some damage to the E. T. McFadden Grain Co. elevator on June 27.

Champaign, Ill.—John B. Woodin, widely known grain dealer, died early July 22 after a four days' illness.

Roseland (Chicago p.o.), Ill.—Cornelius K. Madderom, 85, who operated a feed mill since 1885, died recently.

Chase (DeKalb p.o.), Ill.—Carl Ahlberg has succeeded Leo Elkins as manager of the Holcomb-Dutton Lumber Co. elevator.

Kentland (Yorkville, p.o.), Ill.—Lightning struck and damaged the local elevator of the Farmers Elevator Co. of Yorkville early in June.

Atkinson, Ill.—The Federal-North Iowa Grain Co. elevator was entered recently by thieves who gained entrance thru a window of the door.

Mulberry Grove, Ill.—The Mulberry Equity Exchange, managed by C. M. Carney, is reported to contemplate installation of a feed mixer.

Polo, Ill.—Broderick Bros. have taken over the operation of their elevator property, formerly operated by the Typer Elevator Co., commencing July 1.

Full (Mayview p.o.), Ill.—The Champaign County Grain Co. is taking out the pneumatic system at its elevator and installing an elevator leg.

Winnebago, Ill.—L. N. Bowman is installing a new Hall Signaling Grain Distributor in his plant. I. E. Travis is the contractor in charge of the work.

Nokomis, Ill.—The Howe Truck Scale of the Barnstable Feed & Supply Co., of which C. W. Barnstable is proprietor, has been fitted with a weightograph.

Cortland, Ill.—Leo Elkins, formerly manager of the Holcomb-Dutton Lumber Co. elevator at Chase, is now employed at the Cortland Grain & Lumber Co. elevator.

Pierron, Ill.—A new Boss Car Loader has been installed in the 20,000-bu. elevator of the Pierron Co-operative Equity Exchange, Inc., of which Joseph Spengel is manager.

Quincy, Ill.—The May Way Mills, Inc., dealers in grains, cereals, seeds, etc., with headquarters at Kansas City, Mo., have opened a store here, with Henry Reverend as manager.

Troy, Ill.—Troy Grain Co., managed by Harry Taake, has installed a one-ton vertical Blue Streak Feed Mixer, and has reset its Blue Streak Hammer Mill for more convenient operation.

Sheldon, Ill.—Frank Bishopp is reported re-entering the grain and coal business at the old stand. The elevator on the T. P. & W. is being repainted and the office fixed up, with new truck scale in front.

Meredosia, Ill.—The new A. B. Chrisman Grain Co. elevator is completed and started operating July 3 when 17,000 bus. of wheat was taken in. It has a capacity of 240,000 bus. and together with the old elevator, the total capacity is 300,000 bus.

St. Jacob, Ill.—The old mill building of Valier & Spies Milling Corp. here is being dismantled and razed. The elevators, which have a rated capacity for 240,000 bus., are the active part of this plant. The old mill building has not been used for several years.

Chenoa, Ill.—C. W. Parry, operator of two elevators here, has under construction a 40x20 ft. frame, iron-clad warehouse for storing seeds. The warehouse is being fitted with garage doors at one end, so it can also be used as a garage for the company's truck.

Towanda, Ill.—The Towanda Grain Co., Co-operative, managed by B. C. Kraft, purchased on July 1, the 25,000 bu. elevator of C. E. Roseman and will raze it. The Towanda Grain Co., Co-operative, operates a 40,000 bu. modern elevator here on the Alton railroad.

Highland, Ill.—The Howe Truck Scale in the office of the F. M. B. A. Elevator Co., which is managed by Seldon Ulmet, has been improved with installation of a Howe Weightograph. The hammer mill in the company's 15,000-bu. elevator has been fitted with a variable feed.

Meyer (Warsaw p.o.), Ill.—The new elevator of the Ursa Farmers Co-op. Elvtr. Co. is ready for grain. The 35,000-bu. elevator has a loading capacity of 5,000 bus. per hour. A loading pier of 350 ft. accommodates seven barges. Dredging to anchor the barges is practically completed.

Sibley, Ill.—The Sibley Grain Co. is giving its office a new coat of paint on the outside and a re-decorating on the interior. This is one of the most substantial farmer grain companies in the state which is due to the competent management of E. T. Johnston who has been manager since 1908.

Del Rey, Ill.—The Del Rey Farmers Grain Co., managed by Wm. F. Siemons, has contracted for construction of a reinforced concrete tank to increase its storage capacity. The tank will be 24 ft. in diameter and 60 ft. high, and will hold 21,000 bus. It will be erected by J. E. Reeser & Son.

East Moline, Ill.—John Siefken, operator of the Independent Feed Co. is constructing a modern and spacious feed storage building and milling plant on Eighteenth Ave. The new structure will be of concrete, 40x80 ft. As soon as completed he will move his business from its present address.

Hamel (Worden, R.R. No. 1), Ill.—Fred Wiehe is the new manager of the Hamel Co-operative Grain Co. He has been a director of the company for 20 years, and took the place of W. E. Leischenring as manager on July 1. Mr. Leischenring has become associated with Dippold Bros. flour and feed mill at Edwardsville, Ill.

Greenville, Ill.—An 11½x12 ft. frame and iron clad driveway, equipped with a Portable Elvtr. Co. Electric Overhead Trucklift, has been erected on the 8,000-bu. elevator of the Greenville Elvtr. Co., managed by F. J. Malan, for receiving small grains. The old dump over the ear corn bins is being continued in operation for handling ear corn.

Lintner (Hammond p.o.), Ill.—The large bin used for grain storage on the Evans Elvtr. Co. property burst July 3, spilling 11,000 bus. of corn on the ground. The company was shipping corn out to Chicago, and had the south bin practically empty when the other bin opened up, pouring the corn all over the place. The bin still standing will be taken down and will not be rebuilt.

Ballard (Chenoa p.o.), Ill.—The local elevator of the Chenoa Grain Co. has a new office, with celotex lined interior, and a large desk built around the scale beam. The office is finished with asbestos shingles on the outside, and has an extension of its roof over the scale deck. Local manager is John Cundiff. Head office is at Chenoa, where J. A. Harrison is manager. Prospective further improvements include construction of additional storage space, depending upon the corn crop prospects.

Irving, Ill.—The new 6,500-bu. truck loading elevator of the Irving Grain Co. is rapidly nearing completion, but will be increased in size this fall by construction of two more bins to double its capacity. The elevator is fitted with a McMillin Truck Lift, a single leg with 11x6 inch Calumet Buckets, a 10 h.p. motor on the leg, and three truck loading spouts. About 90% of its shipments are by truck. Miss Doris Hines is the local manager. The elevator is owned by Barnstable-Ware Feed & Supply Co. of Hillsboro, and Toberman Grain Co. of St. Louis.

Hillsboro, Ill.—R. F. Spinner, operator of the Spinner Coal Yard, has erected and is operating a leg and blower for loading cars with grain on a loading charge basis. The unit consists of a McMillin Electric Truck Hoist in a frame built for this purpose, a small, grate covered concrete receiving pit, a leg and a blower. Union Iron Works supplied the elevating machinery. A new variety of scooper.

Champaign, Ill.—Robert Edward Rising died in the Burnham City Hospital July 11, age 65. Mr. Rising had been in poor health for the past year. He spent the latter part of the winter in Florida and returned to his home last May much improved in health. He suffered a relapse early in June and was confined to his home until taken to the hospital July 7, where he passed away the following Thursday. Mr. Rising had spent practically all of his business career in the grain business. He owned and operated various country grain elevators in eastern Illinois and was for several years manager of the Thomasboro Farmers Elvtr. Co. In 1932 Mr. Rising was manager of the J. H. Dole & Co. office in Champaign, until Jan. 1, 1933, when the Dole commission firm was taken over by Daniel F. Rice & Co. In July, 1939, Mr. Rising formed a partnership with Harry R. Sawyer and engaged in the grain brokerage business under the firm name of Sawyer & Rising. This firm was dissolved by mutual agreement.

Highland, Ill.—The Central Feed Mills, Inc., whose mill burned on June 19, has been dissolved, the interests of all officers and stockholders being taken over by B. R. Bauman, who was president of the old company, and the insurance and capital being used to pay out all stockholders in the company at above par. In buying interests of other stockholders Mr. Bauman has acquired the firm name and all rights to the Eclipse brand under which 28 different feeds were manufactured. He has bot the 65,000-bu. reinforced concrete elevator and 100x32 ft. concrete warehouse of the old Highland Milling Co., which he is modernizing for operation as a feed plant in conjunction with what remains of the old Central Feed Mills, Inc., feed plant. The elevator will be fitted with a truck load receiving shed, a receiving pit, a truck dump and other machinery and in the warehouse will be installed hammer mills and feed mixers to continue the manufacture of the Eclipse brand feeds that brought the old company a 62 per cent increase in its feed business last year. The new plant, when completed, will be housed in fireproof buildings.

CHICAGO NOTES

The Chicago Board of Trade held its annual outing July 14 at the St. Andrews Country Club where golf, soft ball, horseshoes, and other sports were enjoyed, followed by a chicken dinner and entertainment.

A decline to a new low in many years was reached in the price of membership certificates in the Board of Trade, sales being made down to \$1,000, a decline of \$200 from the week before. Posted offers of certificates were at \$1,200 and highest bid at \$900.

The annual election of the Chicago Board of Trade Post 304, American Legion, was held July 11 in the Assembly Room of the Board. The following were elected: Major Arthur Langlund, commander; Edw. Kelly, senior vice-commander; Ivor Johnson, junior vice-commander; Harry Paul, service officer; directors, Mortimer Safford and Irving McCaul; delegates

to state convention, William Schwartz, Henry King and Harvey Peterson.

Harold Anderson, head of the Anderson Elvtr. Co., and active for many years in the grain business, was recently elected a member of the Chicago Board of Trade. Mr. Anderson was formerly president of the National Milling Co. before its sale to the National Biscuit Co.

INDIANA

Shirley, Ind.—The Shirley Elvtr. Co. has been remodeled, made ready for the harvest rush.

Bremen, Ind.—Fred E. Bolby, manager of the Bremen Elevator, died at his home here July 14 of a heart attack.

Lebanon, Ind.—The Boone Grain & Seed Co., Inc., has installed a 24-ton, 34x9 ft. concrete deck Bonded Truck Scale.

Denver, Ind.—The Mayer Grain Co. has remodeled its office and built a new feed warehouse, size 20x42 ft.—A. E. L.

Gaston, Ind.—A new two-unit type coal un-loader (with track conveyor) was installed at the Goodrich Bros. elevator.—A. E. L.

Dunkirk, Ind.—Whittaker & Stewart installed a Bonded Truck Scale, 16½ tons capacity with 22x9 ft. platform, at their new feed mill.

Danville, Ind.—Hendricks Co. Farm Bureau Co-op. Ass'n has installed a No. 15½-D Kelly Duplex Corn Cutter and Grader with motor drive.

Van Buren, Ind.—The Farmers Equity Exchange recently installed a new cleaner and ten h.p. motor directly connected to the cleaner.—A. E. L.

Muncie, Ind.—The Warren Coal & Feed Co. recently installed a combined sheller and cleaner, corn cracker and vertical feed mixer in their plant.

Wabash, Ind.—Grain elevator operators of Wabash County met in local A.A.A. headquarters recently to listen to an explanation of the 1940 wheat storage program.

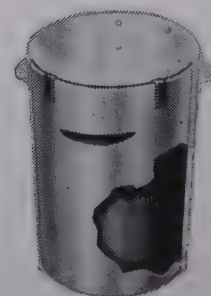
Winchester, Ind.—John B. Shanks, formerly with Greene Township Farm Bureau, Inc., of Milligan, is the new manager of the Randolph County Farm Bureau Co-op. Ass'n elevator.

Horton (Sheridan R.F.D.), Ind.—The Hamilton County Farm Bureau Ass'n purchased the Caca Elevator Co. elevator and will make numerous improvements to the property.—A. E. L.

Otterbein, Ind.—Arville Johnson, operator of Rich, Johnson & McDowell, Inc., elevator, has purchased property in West Lafayette and will locate there. He will continue to operate the local elevator.

New Paris, Ind.—Fire damaged the new alfalfa mill of Dwiggins & Sons early July 3, just one month after the plant had started operating. The flames were confined to the third floor of the 40x50 ft. building housing the mill proper. The frame combination office and garage and steel warehouse were not endangered. A fuse blowing out in the magnetic separator, it is said, may have caused the fire. New machinery has been ordered to replace the damaged equipment and the mill will be placed back in operation as quickly as possible.

Gerber's New Flexible Loading Spout Liner Makes Worn Sections Like New



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Flexible Spout Section

Slip a Gerber Spout Liner in the worn section and eliminate leaks. No bolts to insert. Can be installed in a minute without removing section. Made of Manganese high tensile steel, giving three times the wear of ordinary steel. Inexpensive.

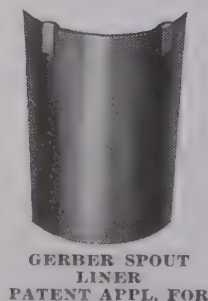
Standard Sizes (8" top, 7" bottom and 9" top, 8" bottom). Special sizes to order.

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Speicher (Wabash p.o.), Ind.—The Wabash County Farm Bureau Ass'n is installing a new 20-ton truck scale and adding a new feed warehouse and cob room.—A. E. L.

Aroma (Atlanta p.o.), Ind.—Berlin Rogers will replace his present hammer mill with a new one. Recently Mr. Rogers suffered the total loss of one finger while cleaning the hopper of feed mixer by hand, with the mixer in motion.—A. E. L.

Valparaiso, Ind.—The Brown Coal & Supply Co. recently reopened its South Washington St. elevator known locally as the "Pennsy" elevator, which has been vacant for the last several years. The elevator has been completely re-conditioned. Grinding, mixing and shelling are specialties offered by the company, and in addition to grain and feeds, coal is sold. D. R. Eaton, of Boone Grove, has been named manager and Pete Brown, assistant.

Fort Wayne, Ind.—The Northeastern Indiana Hay & Grain Dealers Ass'n co-operating with the Indiana Grain Dealers Ass'n met here the evening of July 15 when problems of interest to the grain trade were discussed, and information of local, terminal and world conditions given. Sec'y Fred K. Sale of the Indiana Grain Dealers Ass'n was present and reported on conditions as he found them thruout the state where several meetings have been held. Avon Burk is president of the Northeastern Indiana Hay & Grain Dealers Ass'n, and L. R. Rumsyre is sec'y.

Hanna, Ind.—A keen observation of details and a good memory on the part of the son of F. S. Yeoman, treasurer of the Hanna Lumber & Grain Co., was a major factor in bringing about the arrest June 7 of a gang of safe-crackers operating successfully for several weeks this spring in this vicinity. When he noticed a strange automobile parked near the elevator he took mental note of its make. That night the elevator was robbed. The following morning he recalled that car and remembered a portion of the license number. Checking up tire tracks at the elevator and those at the machine shop where the auto's occupants had borrowed an acetylene outfit, they were those made by the same car. With this information given the police, five men were arrested within a short time; four confessed to the burglary charge and were held for second degree burglary. The fifth man pleaded innocent and will be given an early trial. The Hanna Lumber & Grain Co. elevator, the Pinola Co-op. Co., and the Union Center Elevator are among the places robbed. The gang got about \$850 in cash in the various burglaries, in addition to a quantity of merchandise. The victims' losses were greatly augmented by the fact that the wife of one of the gang burned all of the papers secured in the robberies, including checks, notes and records.

IOWA

Ferguson, Ia.—The Ferguson Grain Co. has been dissolved.

Brunsville, Ia.—The H. J. Harms Grain Co. elevator was destroyed by fire recently.

Hanlontown, Ia.—Ruben Rolands of Lake Mills is new manager of the local Farmers Elevator.

Arlington, Ia.—R. W. Johnson has taken over the former Gitchell Bros. feed, coal and grain business.

Corning, Ia.—The Farmers Co-operative Exchange has installed a new 20-ton scale at its elevator.

Larchwood, Ia.—The Farmers Co-operative Ass'n has purchased the Davenport Elvtr. Co. business.

Clear Lake, Ia.—The Farmers Elevator is installing new electric equipment to replace the old gas engine in use for years.

Harlan, Ia.—Fifty grain men attended the meeting held here July 2 under the auspices of the Western Grain Dealers Ass'n.

Manson, Ia.—Fire July 18 gutted the interior of the cement elevator owned by the Farmers Elvtr. Co. The loss was partially insured.

Cedar Bluffs, Ia.—The Farmers Union Elevator has purchased the local property and business of the Updike Grain Corp., taking possession July 17.

Dougherty, Ia.—The new elevator of Farmers, Inc., Co-operative Society will be equipped with a 20-ton Soweigh Motor Truck Scale with 34x9-ft. platform.

Kamrar, Ia.—The Farmers Co-operative Elvtr. Co. has finished moving its office and installing a 30-ton 10x34 ft. Fairbanks Scale. Geo. Todd had the contract.

Council Bluffs, Ia.—About a ton of feed in a metal-lined bin at the Raven Mills, Inc., was destroyed by fire of unknown origin early the morning of July 9.

West Bend, Ia.—The Westbend Elvtr. Co. is installing a new 30-ton, 36x10 ft. concrete deck Soweigh Scale at its elevator. George Todd Const. Co. has the contract.

Cherokee, Ia.—Roy R. Turner, who recently bot and now operates the Perry Boughton & Co. elevator here, was married May 19 to Miss Selma Swanson at South Sioux City.

Bedford, Ia.—Fred W. Dean of Mondamin, Ia., is new manager of the Farmers Elvtr. Co. elevator, replacing George Irwin who served in that capacity for the last three years.

Farmersburg, Ia.—The H. W. Thompson elevator and equipment was sold to Louis Lenth of Elkader by F. A. Moser, administrator for the H. W. Thompson estate. Mr. Lenth plans to begin operations by Aug. 1.

Jesup, Ia.—The Farmers Grain & Stock Co. has installed a new 20-ton scale and hydraulic lift. The brick office was moved 4½ ft. south to make room for the scale and the driveway was lowered for the convenience of trucks.

Terrill, Ia.—The Farmers Co-operative Elvtr. Co. will build a new elevator, using the old ones to store grain until they are unfit for that purpose after which they will be razed. Frank Anderson is active manager of the elevator.

Preston, Ia.—C. V. Badrick & Son have installed a new corn sheller, mounted on a new truck. The sheller has a capacity of about 900 bus. of corn an hour and is completely equipped with 30 ft. ear corn conveyor and a cob conveyor.

Malvern, Ia.—George Steele Eacrett, 67, died July 14 after a long illness. He was well known in the local grain trade, having been engaged in the grain business for many years here and at Strahan, and at one time operating six grain elevators in this vicinity.

Eagle Grove, Ia.—Plans for the set-up of a soybean processing plant have been received by Otto Knudsen, new head of the Chamber of Commerce, and his board of directors, and the com'ite in charge is working with the farmers' organization to bring about establishment of the plant here.

George, Ia.—Formal opening of the Farmers Elevator's new buildings will take place July 27. Mgr. G. L. Peterson stated. At that time all the buildings will have been completed and new machinery installed. The company has moved into its new office and grain is being taken into the new elevator.

Buffalo Center, Ia.—Edward Theile, manager of the Farmers Elvtr. Co. elevator, was absent from the annual meeting of the company, held July 6, because of illness. It was the first time in 24 years of service he had been unable to attend. The board will meet in the near future to hire a manager for the ensuing year.

New Hampton, Ia.—A modern and complete feed grinding and mixing mill has just been completed by E. C. Heinmiller, replacing the one recently destroyed by fire. Grain bins adjoining the main building are connected with the mixing and grinding departments by means of conveyors. A feed warehouse was built near by.

Somers, Ia.—The Farmers Co-operative Co.'s elevator was damaged by fire July 8 when flames gutted the interior of the white cement structure. A weed burner had gone by on the Rock Island Railroad tracks shortly before the blaze was discovered, and it is believed the flames spread thru the dry grass to the building.

Gruver, Ia.—Government bonds valued at \$7,800 were stolen from the safe of the Paul H. Graves elevator early the morning of July 6 when yeggs forced an entrance to the elevator office and hammered open a 1,200-lb. safe in which the bonds were kept. Mr. Graves owns a line of elevators in northwest Iowa including the local elevator.

Buckeye, Ia.—The Farmers Elvtr. Co.'s new elevator, recently completed, is in operation. It replaces the one that burned April 30. The elevator has a storage capacity of 25,000 bus. of grain, is operated electrically thruout, and is equipped with the latest type machinery. Its two-room office, finished in light paneled oak, is fitted with a white neon lighting system. H. M. Sietlaff is manager of the plant.

Cedar Rapids, Ia.—The group meeting held here under the auspices of the Western Grain Dealers Ass'n on July 9 was attended by 85 grain men of the community, the largest group of persons reported attending any of the ass'n local meetings. Problems of common interest were discussed. These get-together meetings are growing in popularity, the men attending enjoying the sociability of the gatherings as well as the business session.

Oxford, Ia.—The Gifford Grain Co., elevator was destroyed by fire that followed an explosion about 3 p.m. July 15. The blaze was that to have been extinguished after a half hour's battle, but it broke out again seven hours later, destroying the plant. The explosion occurred when employees turned a switch setting the grain-grinding machinery in motion. James Nesmith, an employee, and Gus Brender, who had a load of grain in the building, suffered burns about the face and arms in the afternoon fire. The elevator was owned by L. W. Gifford and operated by his son, Robert L. Gifford.

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is revolutionary due to its unique bottom and high positioned front lip, which, acting in unison with the high sweeping sides raised above the strike line, produces efficiencies heretofore considered impossible. The bucket is of streamlined, one-piece, strong welded construction. No bands or overlaps are used, hence there are no pick-up or discharge obstructions.

Ellsworth, Ia.—The Potgetter Grain Co. will build a 60,000-bu. addition to its elevator, formerly known as the Rude elevator. The Todd Const. Co. was awarded the contract. The Todd company just finished building a 28x28 ft. office for the elevator and installed a 20-ton 34-ft. Soweigh Scale and a new truck hoist.

Atlantic, Ia.—Fire believed to have started from a spark from a passing locomotive damaged a storage shed on the Atlantic Mill & Elvtr. Co. property the morning of July 2. The shed contained oyster shell and other feeds. The loss was small. About 100 farmers attended a dinner sponsored by the company July 17 at the Grove community hall. Interesting talks were made on the care and management of livestock, particularly of poultry and hogs.

Muscatine, Ia.—McKee Feed & Grain Co. is constructing a new feed warehouse on the levee adjoining its elevator. In connection with the warehouse there will be a bulk grain storage for about 2,000 bus. to be used for sacked grain only. The construction of the warehouse is directly on the levee bank and will give the company better facilities for unloading sacked feed from barges and loading sacked grain into barges. McKee Feed & Grain Co. now has a total storage for 1,200 tons of feed.

Des Moines, Ia.—The Iowa State Commerce Commission on July 16 took under advisement a request for a reduction in the rate of storage charges for grain stored in bonded warehouses. Appearing before the commission at a public hearing were representatives of the Western Grain & Feed Dealers Ass'n and of the Farmers Grain Dealers Ass'n. The grain dealers asked that the rates, which are now one-thirtieth of a cent per day for each bushel of stored grain, be lowered to meet government rates allowed under its new contract. Under the government rate the charge after 210 days is eliminated for the remainder of the year.

Dubuque, Ia.—An old swindle in a slightly re-modeled dress worked on the Hendricks Feed Store recently rang up a credit of \$55.35 for the "rocket" at the same time a deficit to that amount was chalked down by the feed company. A telephone call at the feed store inquired for a "Mr. Hobbs." The party calling, representing himself to be from a well known local business firm, was told Mr. Hobbs was unknown at the feed store. But within a few minutes a stranger entered the place, introduced himself as "Mr. Hobbs who had purchased a bill of goods" from the firm that supposedly just telephoned, and "could he get some chicken feed here." He could, to the tune of \$16 worth, which he paid for with a \$71 check. He accepted his \$55.35 in change and left "to pick up the material he had purchased from the other store and then call back for the chicken feed." Hobbs did not come back, but you're

right, the check did, with a great big bounce. The feed store's out the money, and warrants are out for "Mr. Hobbs."

KANSAS

Coffeyville, Kan.—The Cherrio Milling Co. has changed its name to the Blue Tag Mills, Inc.

Oneida, Kan.—Gerald Banks of Bladen, Neb., is assisting Harold Boom at the local elevator.

Wichita, Kan.—The Yancey Grain & Elvtr. Co. recently installed a new 30-ton truck scale.

Ellsworth, Kan.—The Henry Janousek Grain Co. has given its elevator a coat of aluminum paint.

Lewis, Kan.—A large crowd attended the formal opening of the locker system at the Farmers Co-operative Elevator recently.

Hiawatha, Kan.—An effort is being made to locate an alfalfa mill here. The Chamber of Commerce is considering the proposition.

Cimarron, Kan.—The A. H. Hewes Grain Co. of Ingalls has leased the Blanton elevator and Raymond Herron has taken charge as manager.

Elyria, Kan.—Dave Voth sustained a crushed right foot recently while engaged in loading wheat at the Wall-Rogalsky Milling Co. elevator, of which he is manager.

Oakley, Kan.—L. O. Baber has leased the Farmers Elevator for operation. He is an experienced grain man and is well known in the community.

Everest, Kan.—The Geiger Grain Co. has its new elevator addition practically completed. The feed and seeds departments will be housed there, new equipment having been installed in the seed room.

Smith Center, Kan.—Frank Johnson, manager of the Smith Center Mill & Elvtr. Co. plant, suffered a severe heart attack at the elevator, recently, and will be confined to his home for several weeks.

Lawrence, Kan.—The Norris Grain Co. has leased two elevators here and one at Richter, to be managed by Earl Cox. The three houses will be ready for wheat buying operations by the time the harvest is under way.

Fort Scott, Kan.—The Kansas Flour Mills Co. recently installed a new truck scale. Wheat will be stored in the mill's 16 concrete bins under the government loan program. The plant also will buy all marketable grains, M. F. Logan, manager, announced.

Syracuse, Kan.—Additions have been built to the Bray Elvtr. & Supply Co. elevator which increased the storage capacity of its wheat bins 1,000 bus. or more, and doubled the car-loading capacity of the house, Harold Bray, manager, announced.

Toronto, Kan.—A large tile addition has been completed to the Black Grain Co.'s building on East Main St., to be used for storage. The new structure almost doubles the company's floor space and in addition a large basement has been constructed under half of the new building.

Colby, Kan.—The V. M. Harris elevator on the Union Pacific tracks has been re-opened under the management of Sylvan Sidesinger. A full line of seeds and coal will be handled as well as grain. This elevator operated until 10 years ago. Mr. Harris has continued to operate his elevator in Scott City.

Garden City, Kan.—R. C. Daniels, formerly of Hutchinson, has been transferred here to take charge of the George E. Gano Grain Co.'s two elevators, succeeding E. B. Schmitt. During the harvest, Mr. Daniels stated, the Main St. elevator will be used to handle wheat, the Sixth St. elevator to handle barley.

Hanover, Kan.—The roof of the warehouse at the George Imming grain office was damaged slightly by fire recently. It is thought possible flying embers of burning weeds may have caused the fire as the Burlington weed burner had passed the building, located along the Burlington tracks, a short time before.

Rosalia, Kan.—The Marshall Grain Co. has completed a 12,000-bu. iron-clad grain elevator along the Missouri-Pacific Railway Co.'s right of way. Construction started May 15 under the direction of J. B. Marshall, owner of the company. The structure is 51 ft. above the rails and is modern thruout. It is equipped with a 15-ton truck scale and an electric lift; the dump is divided to handle both wheat and oats simultaneously. The office is housed in a separate building. Mr. Marshall formerly was with the Sam P. Wallingford Grain Corp. in El Dorado.

Wichita, Kan.—Quick thinking and heroic action on the part of E. M. Van Horn, insurance inspector for the Grain Dealers National Mutual Insurance Co., saved the life of a 6 year old colored boy in a near drowning accident July 8. When Mr. Van Horn heard children cry "Joe's drowning!" as he sat in the office of F. S. Rexford of the same insurance company, overlooking the Little Arkansas River at Eighth and Bay Boulevard, thinking and action were synonymous with him. Telephoning for police, he dashed to the river and stopping only to "pull off his shoes, jumped, fully clothed, into the water after the child. His only guide to the spot where the boy had disappeared after jumping in "to swim" were bubbles coming to the surface. Diving there, he brought up the body. Swimming to shore, he laid the unconscious form, head lowered, on the river bank, and applied first aid. "I never had any life saving instruction, I just recalled what I had read in the insurance bulletins about the care of persons who drown," he said later. But what he remembered and put into practice, saved the boy's life. Police and firemen arriving soon after, completed the resuscitation. A valuable watch Van Horn carried in a trouser pocket had been forgotten by its owner. When he recalled it, he looked a bit sadly at the water filled time-piece, but police said they would see that it is repaired.

Roxbury, Kan.—The Morrison Grain Co.'s new 30,000-bu. elevator has been completed by Ben Munson & Sons, contractors, and is receiving wheat. Built on a reinforced concrete foundation, its 15 bins, nine of which are overhead, are of short-studded construction. The elevator is completely iron-clad. In the driveway, 14 ft. wide with 12 ft. overhead clearance, is a 5-h.p. heavy duty electric truck lift with steel dump grates 5x7 inches for each dump sink. Its single stand of legs enclosing a 10 inch 5 ply rubber covered belt with 9x5 inch Ehrsam V Cups has a capacity of 2,500 bus. per hour and is driven by a 7½ h.p. totally enclosed and fan cooled motor thru an Ehrsam Head Drive. In the cupola is an Ehrsam Radial Distributor with 16 gage steel spouting to all bins. Not situated on a railroad, outloading is done by steel gates on the outside bin walls where the grain is trucked off to terminal points. A new warehouse also was built in which the office is located, the warehouse building 100x30 ft. and covered with white asbestos shingles. Incoming grain is weighed over a 20-ton Howe Scale with concrete deck, 34x10 ft., with a Howe Weightograph attached to the beam. All power and light wiring thruout is single phase and same is installed in accordance with Mill Mutual specifications. This is the first elevator to be built at this point. It is owned by Lloyd Morrison of Roxbury.

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HUTCHINSON LETTER

The B. K. Smoot membership in the Hutchinson Board of Trade has been transferred to Leroy Livingston of the Smoot Grain Co.'s local office. Mr. Smoot is president of the company, with headquarters at Salina. The membership of the late Frank Summers has been transferred to his son, Ralph Summers, of the Security Elvtr. Co.

Lee Collingwood, prominent Hutchinson grain man, died July 12 in a hospital at Wichita from effects of the fall from his elevator at Shallow Water, July 1. Mr. Collingwood, who was 41 years old, operated the Collingwood Grain Co. in association with his brother, Fred Collingwood. In the 60 ft. fall at his elevator, reported in the last issue of the Journals, he landed on his feet, breaking both ankles, crushing bones in his feet, and snapping a leg bone. Collingwood, a heavily built man, fell when a ladder broke under him.

Harold Francis Veatch, 26, Hutchinson, when attempting to put a belt on the bleaching machine at the Commander Larabee Flour Mills Co. mill July 10, was knocked unconscious and awoke in hospital. Fellow employees found him lying beside the machine. Manager Stone stated either the belt came off or broke and struck Veatch. His injuries were not critical, and no bones were broken. Employees in mills and elevators should protect their lives and limbs by stopping the risky practice of changing belts or making repairs, however minor, on running machinery. The old adage of "better be safe than sorry" never was applied in a more appropriate instance than this one. A few minutes' pause in operations often saves life and limb.

KENTUCKY

Middlesboro, Ky.—The Dixie Feed Store has been incorporated for \$2,000 capital stock by Jesse Stanley, Eva Alexander and Thomas Yarber.—A. W. W.

LOUISIANA

New Orleans, La.—The Langenberg Grain Co. discontinued its local office June 30. G. P. Gaennie, who was with the Langenberg company for 31 years and manager for the last 22 years, has organized the Gaennie Grain Co. and will continue the business in the same office.

New Orleans, La.—Latin American Sales Co., freight forwarders, has inaugurated a new, unique service for all Mississippi Valley exporters using New Orleans as the port of exit. Instead of charging a fee for the translation and completion of export shipping documents the company works on a monthly fee basis which cuts down the service fee by two-thirds.

MARYLAND

Baltimore, Md.—P. Frederick Obrecht & Son, whose large feed establishment was badly damaged by fire several weeks ago, have acquired a large piece of land on Monument St., about one acre of space, and will build a one-story concrete block warehouse on the site.

MICHIGAN

Mt. Pleasant, Mich.—The Harris Milling Co. has been incorporated, \$300,000 common, to deal in grain products.

Grandville, Mich.—Approximately 300 bales of straw were burned recently when fire destroyed a shed owned by the Grandville Elvtr. Co.

Ann Arbor, Mich.—The Washtenaw Farm Buro will build a grain elevator on the former Luick property. A store and office will be located in front of the structure, and nine grain bins will be located in the rear, 40 ft. in height. A warehouse will be included in the building, and a driveway will circle the building.

Lansing, Mich.—The Federal Surplus Commodities Corp. has agreed to purchase 250 cars of Michigan pea beans, U. S. Grade 1 choice hand picked, Agri. Commissioner Elmer A. Beamer has announced. Shipment of the beans began July 1 and will continue to Aug. 31. On June 20 the Michigan Bean Industry Com'te issued a request to the F.S.C.C. to buy beans to alleviate the great surplus of this commodity in the state.

Saginaw, Mich.—The Paterson Grain Co. has opened its branch office at Saginaw, with Richard A. Paterson in charge.

Shafter, Mich.—The Shafterburg Elevator will reopen for business with Edgar Frazier, formerly of Jackson, in charge as manager, following completion of repairs.

Standish, Mich.—The large plant of Hall Milling Co., with its contents, was destroyed by fire early July 7, at a loss of approximately \$50,000, protected by insurance. C. F. Hall, owner of the mill, has had the office of the old Standish Elvtr. Co. elevator remodeled, where he is carrying on business adjustments, planning to remodel the elevator and equip it with modern machinery, to continue on in the regular elevator business. The Hall Milling Co. plant in recent years had been operated on a semi-elevator plan as well as a flour and feed mill.

MINNESOTA

Twin Valley, Minn.—Abner Vehle has purchased the Cargill, Inc. elevator here.

Franklin, Minn.—A. H. Schulte of Danube is the new manager of the Caven elevator here.

Waverly, Minn.—George Berkner has installed a 40-h.p. Fairbanks-Morse Diesel Engine at the Waverly Roller Mills.

Sleepy Eye, Minn.—Wenzel Soukup has been named manager of the Farmers Elvtr. Co., succeeding C. P. Cutting.

Gaylord, Minn.—Fireworks set fire to an awning on the H. M. Noack & Sons plant July 4. Damage was not large.

Raymond, Minn.—Christ M. Miller has retired as manager of the local F. H. Peavey & Co. elevator, formerly the Monarch Elevator.

Lester Prairie, Minn.—R. O. Spletstazer has resigned as manager of the Lester Prairie Farmers Co-operative Elvtr. Co. elevator.

Eldred, Minn.—Gordon Winge, of Boyd, Minn., has taken over the management of the local St. Anthony & Dakota Elvtr. Co. elevator.

Plummer, Minn.—Andrew Gunderson and his son, G. I. Gunderson, have purchased the business of the Farmers Co-operative Grain Co.

Storden, Minn.—Simon Olson, president, and O. A. Farness, manager, of the Farmers Grain Co. here, have resigned from their positions.

Hallock, Minn.—Eddie L. Olson, assistant grain buyer at the state elevator at Grand Forks, N. D., has resigned to accept a position as manager of the Farmers Co-operative Elevator here.

Hewitt, Minn.—F. W. Wenner, owner of the Hewitt Elevator, has replaced the siding on the elevator and painted the structure and adjoining buildings. Several new window frames were installed in the elevator.

Kennedy, Minn.—The Kennedy Farmers Elvtr. Co. let the contract for construction of a new annex to its elevator to the Hogenson Const. Co.

Lake Crystal, Minn.—A new 30-ton, 36x10 ft. scale has been installed at the Hubbard & Palmer Co. elevator where Henry Graif is manager.

Hendricks, Minn.—A new scale has been installed and improvements to the amount of \$2,400 are being made at the Hendricks Farmers Elevator.

Fulda, Minn.—The Evenson-Dickson Grain Co. is installing a new boot tank, Howell Steel Boot and Head, Atlas Rubber Covered Bucket Belting and Calumet Cups.

Wheaton, Minn.—The Martin Hanson Elevator is being improved with the installation of a Howell Direct Connected Geared Head Drive, Howell Roller Bearing Boot, Distributing System and Calumet Cups.

Thief River Falls, Minn.—Robert Peterson has purchased the Farmers elevator and warehouse structure at Goodridge and will move it to this city. He plans to open a grain, seed and feed business.

Duluth, Minn.—July 22 the members of the Duluth Board of Trade voted on amendments to the general rules and by-laws of the association. Amend section 2-b Rule XIII by adding the following—not involving checking of grades, payment of freight charges, etc. Add to section 2 rule XIII a new sub-section readings as follows: "Grain ordered in store for account of consignor shall be subject to the rates of commission provided in Section 2-a for the sale of grain on arrival or to arrive. Such grain may be sold afterward by the original consignee without additional charge." Amend section 5 Rule XIII adding the following: "The brokerage charge for the purchase of grain or flaxseed for future delivery shall not be less than 25 cents per 1,000 bushels." Substitute for section 6 Rule XIII the following: "To members of the Duluth Board of Trade not less than one-half of the regular rates of commission shall be charged. Provided, that on sales on arrival, or to arrive, not less than three-fourths of the regular rates of commission shall be charged, with the minimum charge for selling any car to be nine dollars (\$9.00)."—F. G. C.

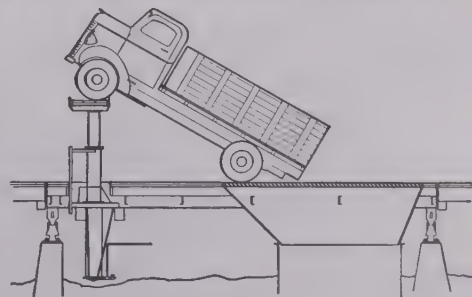
MINNEAPOLIS LETTER

Alterations are being made at the Archer-Daniels-Midland Co. Minneapolis plant, to be completed by Oct. 1.

The Minnesota state testing mill has been closed down until after the legislature meets in 1941. The 1939 legislature repealed the law under which the mill operated and set up a commission for its sale. No bids were received when it was advertised for sale and a subsequent offer of \$5,000 was so far below the appraised value of \$70,000 that it was not considered.

The NEW 1940 Telescoping Dump Has Real Operating Advantages

The 12-inch diameter cylinder gives it a greater lifting capacity than any other dump on the market. It is the only stationary vertical-lift dump that can be hung from the scale timbers.



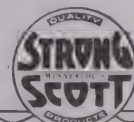
The new features assure lowest installation cost.

Everything for Every Mill, Elevator
and Feed Plant

The Strong-Scott Mfg Co.

Branch Office: Great Falls, Mont.

Minneapolis Minn.



Evidently the large elevators of the twin cities do not care to be bothered with truck loads of grain so have not provided facilities for receiving grain from trucks.—C. W. T.

MISSOURI

Bertrand, Mo.—The John Cunningham feed mill was destroyed by fire recently.

Smithville, Mo.—The new elevator, recently constructed by the Farmers Exchange Co., is now in use.

East Prairie, Mo.—East Prairie Milling Co. recently installed a No. 1 Kelly Duplex Vertical Feed Mixer, ½-ton capacity.

St. Joseph, Mo.—Thos. A. Wolf, 59, active in local grain trade for many years, died in a Kansas City hospital July 19.—P.J.P.

Appleton City, Mo.—M. D. Grider has purchased the north elevator from the Morrison-Gregg-Mitchell Grain Co.—H. M. A.

Fredericktown, Mo.—The Fredericktown Milling Co. is increasing its grain storage space by erection of two glazed tile bins adjacent to the elevator.

Wentzville, Mo.—The Co-operative Ass'n No. 20 has purchased the elevator of the Karrenbrook Milling Co., which it will use for grain storage.

Phelps City, Mo.—The Norris Grain Co. has leased the Phelps City Elevator from the Danen Grain & Milling Co., owners, of St. Joseph, Mo.—H. M. A.

La Plata, Mo.—The Farmers Exchange warehouse, destroyed by fire recently, is being rebuilt. Among new equipment to be installed by the Exchange is a feed grinder.

Hamilton, Mo.—The H. H. Green Mill & Elvtr. Co. has installed all new wiring in the mill building. This was installed by the A.A.A. Electric Co.; cost, \$200.—H. M. A.

Bunceton, Mo.—The Boonville Mills Co. has leased the Farmers Elvtr. Co. plant. F. E. Filler will remain as manager and there will be no change in the operation.—H. M. A.

Miller, Mo.—The Hood Milling Co. of Miller and Greenfield, Mo., voluntarily complied with the Wage and Hour Law to the sum of \$3,011.66, divided among nine employees, ranging from \$58 to \$840 each.

Hardin, Mo.—J. K. Quick, who has operated the Hardin Grain Co. elevator for the last 14 years, sold a half interest to the Hart-Bartlett-Sturtevant Grain Co. of Kansas City. A new 30,000-bu. elevator is under discussion.

Golden City, Mo.—Kenneth C. Wright of Jasper has been installed as manager of the Farmers Grain & Supply Co. elevator. He replaces Lon Vincent who was killed in an automobile accident June 19, near Springfield, Mo.—H. M. A.

St. Joseph, Mo.—The Salina Terminal Elvtr. Co. will reopen the Burlington elevator, closed a month ago by the company. The 1,000,000-bu. house will operate under the management of K. B. Clark, who also operates the Ken Clark Grain Co.

Aurora, Mo.—Forty-seven of the 58 claimants of back wages against Majestic flour mill received checks totaling \$35,000 recently, writing fins to the five-year old N.L.R.B. controversy. The payment followed a settlement agreement between the company and the N.L.R.B. which did not include reinstatement of these workers. During these five years the mill has burned, and it now appears there is no chance it will be rebuilt.

Anderson, Mo.—B. H. Ragland, Jr., of Cave Springs, Ark., has leased the Anderson mill from S. G. Chamberlain, taking charge July 1. He was associated with his father in the milling business at Cave Springs before coming here.

Salisbury, Mo.—Thomas H. Edwards, 68, former president of the Salisbury Milling Co., and formerly for several years mayor, died July 9, from a self-inflicted bullet wound, inflicted July 5. He had been in ill health for some time and had been despondent recently.—P. J. P.

Otterville, Mo.—The Otterville Elvtr. Co. elevator, operated by W. N. Ellis, was destroyed by fire the night of June 24. The loss to building and stock was partially covered by insurance. About 700 bus. of wheat, a quantity of feed and flour were stored in the structure, owned by R. J. Ellis and his son, Newton, of Syracuse.

Malta Bend, Mo.—The Rea & Page Milling Co. elevator has been approved for storage of wheat under the government loan program. Other warehouses listed recently to receive wheat under the loan program were Rea & Page Milling Co., Marshall, Napton and Blosser; Pike Grain Co., Sweet Springs and Shackelford; Slater Mill & Elvtr. Co., Slater and Norton; Nelson Co-op. Grain Co., Nelson; Co-op. Ass'n No. 1, Slater.—P. J. P.

LaMonte, Mo.—The LaMonte Elvtr. Co.'s new elevator has been completed and to celebrate its opening, a "jamboree" was held there the evening of July 3. There was a program of band music, short talks, and free lemonade was dispensed to a large number of persons attending. Ernest and W. C. Jones are managers of the new business. The 60,000-bu. elevator is built entirely of concrete, is as near fireproof as it is possible to make it. Its total height is 105 ft. New, modern fast handling machinery has been installed including an electric truck hoist, manlift, electric leg, cleaner and automatic dump scale. A new warehouse and office building has been built, the warehouse to be used to store sacked wheat and to house the feed grinding and mixing machinery. A 25-ton truck scale has been installed.

KANSAS CITY LETTER

Edmund Marshall is now associated with the Shannon Grain Co., succeeding the late Edward M. Jolley.

Edward M. Jolley, 69, one of the oldest members of the Kansas City Board of Trade, died July 8 after a week's illness. For 22 years he was sales manager of the Shannon Grain Co.

E. F. Emmons has become associated with the Standard Elvtr. & Grain Division of the Standard Milling Co., and will have charge of the wheat merchandising department of the business. The Standard Grain & Elvtr. Division recently took over the 2,500,000-bu. Elevator B of the Missouri Pacific Railroad, which is being operated as a separate business for the merchandising and storage of grain. Mr. Emmons was president of the Kansas City Board of Trade in 1938 and has long been associated with the grain trade here.

MONTANA

Hobson, Mont.—Cargill, Inc., installed a new head drive motor at its local elevator.

Fallon, Mont.—The International Elvtr. Co. is planning to move its feed mill here from Terry, Mont.

Baker, Mont.—The Bagley elevator was closed for two weeks after July 1 during which time R. Stevens, manager, was in hospital.

Helena, Mont.—John T. Kelly, state commissioner of agriculture, left by plane for Washington, D. C., early this month, where he will oppose the federal plan of storing grain in elevators on a year-to-year basis without providing a liquidating date for storage tickets, by making a direct protest against a proposed agreement between the federal commodity credit corporation and Montana elevator operators. He will lodge his protest with Sec'y Henry Wallace.

Terry, Mont.—If plans announced by the International Elvtr. Co. are carried thru, that company will move its feed mill to Fallon this month and take down the elevator building it occupied here.

Richey, Mont.—The International Elevator property here has been purchased by the Farmers Union Trading Co., who took immediate possession. The latter company has been in charge of the adjoining east elevator for some time past, and is expected to conduct both elevators during this crop year. E. A. Hams has been manager of the Farmers Union Elvtr. Co. elevator for several years. John Cowan, manager of the International Elvtr. Co. business since Jan., 1917, and the pioneer grain man of Richey, reaching the company age limit is voluntarily retiring.

NEBRASKA

Bertrand, Neb.—A new Fairbanks Scale has been installed at the Holdrege Roller Mills elevator.

Potter, Neb.—A new 20-ton 9x34-ft. scale with type registering beam has been installed at the William Hagemester elevator.

Gordon, Neb.—William Schwegler, who recently resigned his position with Fall River (Cal.) Milling Co., has leased the Felix Mill here.

Sidney, Neb.—S. B. Haymart, former manager of the Farmers Elevator at Ruby (Milford p.o.), Neb., is manager of the local Farmers Elevator.

Cedar Rapids, Neb.—V-C Grain Co. has opened the former Van Ackeren Bros. elevator and feed mill. It will carry a complete line of feeds and do custom grinding, as well as buy and sell grain. A new 20-ton beam scale has been installed.

Shelton, Neb.—Calvin Tomlinson, manager of the Uppike Grain Co. elevator, sustained a badly bruised and injured ankle July 13 when one foot became caught in an exposed conveyor which had been left open while some grain was being elevated into bins.

Bradshaw, Neb.—C. E. Trump as manager for the West Central Grain Co. of Omaha, opened the west elevator, known as P. F. Steinberg & Son, July 9, pending final completion of details of the recently newly organized Farmers Co-op. Grain Ass'n of Bradshaw.

York, Neb.—Theodore Counter, manager of York Milling & Elvtr. Co. elevator, is in a McCook hospital where he recently underwent an appendectomy. During his absence his father-in-law, Mr. Banta, of Oberlin, Kan., is in charge at the elevator. The company has leased the Knox elevator located three miles south of here, and will utilize the building for grain storage.

Grand Island, Neb.—A proposal has been made by a com'te of the Hall County Historical Society, to acquire, by gift, the necessary yardage for the perpetual marking of the historic site of Blunk's Mill, a water power driven mill in the early days located on Wood River south of Stolley State park. It ground the grist for early settlers within a radius of 50 to 60 miles.

Sidney, Neb.—The Farmers Co-operative Grain Co. has been organized, with a capital stock of \$50,000. The I. E. Grabil elevator has been leased and is being repaired in preparation for the 1940 crop. It is understood that eventually the company will build a large storage elevator here, probably on the spur track between the Burlington and Union Pacific Railroads.

LIBERTY GRAIN BLOWERS

fill cars to capacity without inside scooping in 1½ to 2 hours. Saves expense of scooping labor, and loads more cars per day. Easily moved from place to place. The only thing for loading cars on R.R. spurs. Write for particulars.

Midwest Steel Products Co.
728 X Delaware, Kansas City, Mo.



MIDWEST GRAIN BINS

answers your surplus storage problems. 5 sizes, 500 to 2250 Bu. Easy to move or erect. Extra profit also selling bins to your farmer customers who require farm storage. Also steel Corn Cribs. Write for particulars.

Midwest Steel Products Co.
728 X Delaware, Kansas City, Mo.



SOYBEANS

Our 4 plants offer a market all year 'round for your soybeans. Our CHOWS furnish the largest individual market for soybean oilmeal.

Ralston Purina Company

St. Louis, Mo.
Lafayette, Ind. Circleville, Ohio
Osceola, Ark.

Scoular-Bishop Grain Co.

GRAIN MERCHANTS

KANSAS CITY WICHITA OMAHA

Fremont, Neb.—The Marr Soybean Processing Plant will start operations on a three weeks' run as soon as equipment has been made ready Mgr. Pete Marr announced recently.

Omaha, Neb.—Effective as of July 1, 1940, the Omaha Grain Exchange made a charge of ten cents for each additional inspection, weighing and protein certificate required on grain.

Shubert, Neb.—Hoisting machinery and its track, located in the driveway at the F. H. Knisley elevator, were pulled down on top of an auto driven by R. A. Hanika, July 18, when a chain dangling from the overhead hoist caught the door-handle of the car as it was driving away, and crashing thru the top, injured Mr. Hanika. He had driven into the driveway to obtain chicken feed. Mrs. Hanika, who accompanied him, was uninjured, but he suffered a badly lacerated scalp.

Benkelman, Neb.—E. F. Ham recently sold his interests in the Pike's Peak Grain Co. of Denver, and purchased the O. M. Kellogg Grain Co. elevators here, in Doane, Parks and Eckley, Colo., along with the Kellogg residence property in each town except Parks. Mr. Ham has taken over the management of his new elevators. Claude Williams will continue as local manager and of the other county elevators; Floyd Stewart will remain in charge of Doane elevator and Johnnie Roemmich at Parks. The office of the local elevator is being remodeled to provide room for the bookkeeping department of the business, Harry L. Ough, the bookkeeper. The line of elevators will be operated under their former name, the Independent Elevators. O. M. Kellogg has won the high esteem of all here in his more than 30 years in local elevator circles.

NEW JERSEY

Orange, N. J.—A. D. O'Neill, 81, retired grain broker, died recently.

Bridgeton, N. J.—Berkowitz Feed Mill, Inc., Norma, has purchased the Comb Mill, and will conduct a branch here.

Centerton, N. J.—George Schalick, 69, who operated a grain and feed business here for 49 years, died recently after a long illness. He bot a mill when he was 20 years old and operated it for 25 years. When it was destroyed by fire in 1923, he erected a new mill.

NEW YORK

Deposit, N. Y.—Delaware Mills has taken over the Hinman plant, thus increasing its mixing capacity.

Cuylerville, N. Y.—Spontaneous combustion is believed to have been responsible for a fire that destroyed the plant of the Valley Alfalfa Corporation. The company was organized several years ago to prepare alfalfa for uses other than as feed for livestock. William P. Wadsworth was president.—G. E. T.

BUFFALO LETTER

A business name has been filed in Buffalo for the Soybean Products Co. by S. R. Morgan, Kenmore, N. Y.

Retention of seniority rights in the event of military service, a 2½ cent general hourly increase, time and a half pay for Saturdays and overtime and two-week vacations with pay are provided for 130 employees of the Black Rock Milling Corp. and Park & Pollard Co., Inc., of Buffalo, according to an oral agreement with Local 19184, Flour, Feed & Cereal Workers' Union.—G. E. T.

One hundred employees of the Maritime Milling Co. of Buffalo won new benefits in a contract signed between the company and Local 19,184, Flour, Feed & Cereal Workers' Federated Union. Besides a 2½-cent hourly wage increase, vacations with pay and time-and-a-half for Saturday work, the contract contains a war clause that guarantees that if men are drafted for war duty their seniority rights will be recognized upon return to their jobs.—G. E. T.

Two hundred striking employees of the Buffalo feed mill of the Co-operative G. L. F. Mills, Inc., went back to work July 12 after settlement of a strike in protest against the management's refusal to incorporate in a union contract renewal a clause guaranteeing proportionate wage increases as the cost of living rises. Company Pres. A. L. Bibbins had said he was willing to grant a two-and-one-half cents-an-hour increase, but "cannot guarantee a man's future security."—G. E. T.

NORTH DAKOTA

Oakes, N. D.—The Roney Seed & Feed Co. is completing a new elevator.

Hankinson, N. D.—A. A. Glock of Warren, N. D. is the new manager of the Cargill, Inc. elevator.

Crosby, N. D.—The Atlantic Elvtr. Co. elevator has been sold to the Osborne-McMillan Elvtr. Co.

Cooperstown, N. D.—L. O. Odegard has been named as manager of the Cooperstown Co-operative Ass'n elevator.

Brantford, N. D.—Mr. Rygg of Clifford, N. D., is the new manager of the Winters-Truesdell-Diercks Co. elevator here.

Hatton, N. D.—O. E. Thurnau of Lankin is manager of the F. H. Peavey & Co. elevator (formerly Monarch Elevators).

Rugby, N. D.—Extensive repairs are being made to the Rugby Milling Co. plant. A new scale and dump are being installed.

Clyde, N. D.—L. L. Kruchten, in the grain business at Perth for many years, has purchased the local Peoples Grain Co. business.

Mayville, N. D.—R. G. Hefta recently resigned as manager of the Equity Elevator at McVile to manage the local Farmers Elevator.

New England, N. D.—A small fire originating on the roof of the drive did some damage to the Farmers Equity Exchange elevator July 2.

Finley, N. D.—The Farmers Grain & Elvtr. Co. has installed new grain spouts at its elevator, making it possible to load two cars at one time.

Mayville, N. D.—Oscar H. Moen has resigned his position as manager of the Farmers Union Elevator Co. elevator after nearly 20 years of service.

Oberon, N. D.—Chester Larson, former manager of the Equity Elevator at New Rockford, has been named manager of the Farmers Elevator here.

Kelso, N. D.—The Equity Elvtr. & Trading Co. has been given authority to amend its by-laws to make it a strict co-operative. Orville Christianson is manager of the elevator.

West Fargo, N. D.—Max Goldberg, operator of a line of elevators in North Dakota and Minnesota, with headquarters at Moorhead, Minn., is building a 50,000-bu. warehouse here.

Rugby, N. D.—Patrons of Fairview Mill Co. will soon be weighing their grain over a new Soweigh Motor Truck Dump Scale with platform, 26x9 ft. This scale is one of a number of improvements made by the Fairview Mill Co. at its various plants.

Clement, N. D.—The Clement Equity Exchange Elevator, built in 1917 and operated co-operatively by local farmers, has been sold, razed, and the lumber and machinery used in the construction of the new elevator being built for the Roney Seed & Feed Co., Oakes, N. D.

Bismarck, N. D.—Cleanliness and care about the elevator premises, inside and outside the structure, and clearing of weeds from about the elevator and its nearby buildings in a state-wide program to prevent fires and protect grain elevators from sabotage is urged by Insurance Commissioner Oscar E. Erickson, ex-officio fire marshal. Erickson urged fire chiefs to check elevators in their communities for hazards. Every pane in the building should be whole, he said.

A NEW world is in the making — a great industrial revolution in progress. Europe will be reorganized — industries and finance — small nations eliminated. So off with your rose colored glasses. American business must reef its sails — face the storm — or be swept away. Competition east — the new Germany — west the new Japan — will mean for America — longer hours — lower wages — smaller profits. Will it be — world inflation — deflation — or repudiation? — — *Excerpts from Babson's Reports.*

LOWELL HOIT & CO.

Fullerton, N. D.—W. H. Hazzard resigned as manager of the Baldwin Corp. Elevator near Fullerton, effective July 1, in favor of his son, Clarence O. Hazzard. Mr. Hazzard has been manager of different elevators in this vicinity for 23 years, and had been with the Baldwin Corp. Elevator for 11 years.

OHIO

Pittsburg, O.—Hamel & Niswonger recently installed a new hammer-mill.

Ottawa, O.—The Ottawa Grain Co. installed a No. 15½-D Kelly Duplex Corn Cutter and Grader.

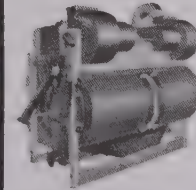
Toledo, O.—Cargill, Inc., has added to its Toledo office personnel James K. Snoufer, traffic manager, and James W. Acles, wire operator.

Toledo, O.—The Southworth Grain Co. is moving its offices from the Gardner Building to the Produce Exchange Building.

Springfield, O.—Ethan Allen Schaeffer, Sr., 75, who formerly for about 40 years operated the Schaeffer Grain Elevator, died recently.

Cridersville, O.—Reichelderfer & Graham recently installed an Ajax hammermill with direct connected 50 h.p. motor complete which they purchased from the Sidney Grain Machinery Co.

USE CLELAND Cleaners



For Most Efficient Cleaning, Largest Capacity, Handles All Grain or Seed, Lowest Price Quality Construction—Built in 6 Sizes.

Write

CLELAND MFG. CO.
Minneapolis, Minnesota
Established 1824

Official Brown-Duvel MOISTURE TESTERS

TagHeppenstall Moisture Meters and a complete line of grain and seed testing equipment. Every item guaranteed up to government specifications.

HARRY B. OLSON, 211 W. Wacker Drive, CHICAGO, ILL.

STRATTON GRAIN CO.

MILWAUKEE, WIS.

CHICAGO, ILL.

SPRINGFIELD, O.

ST. JOSEPH, MO.

NEW YORK, N. Y.

MILL FEEDS — FEED PRODUCTS — BY-PRODUCTS

Consignments and Future Orders Solicited

North Baltimore, O.—Vandersall & Co. have installed new elevating equipment, a new grinder for use in the production of alfalfa meal and a new 20-ton scale.

Ada, O.—Ada Farmers Exchange added to its new equipment with a large Eureka Standard Cleaner with Buhler Drive, bought thru the Sidney Grain Machinery Co.

Toledo, O.—Leonard Carmichael, superintendent of the National Milling Co., recently retired, has been succeeded by N. E. Sinnott, assistant superintendent for many years.

Springfield, O.—A tax claim of \$32,558 against the Ohio Farmers Grain & Milling Ass'n has been dropped by the internal revenue department at Washington, which reported the ass'n was over assessed.

Ashville, O.—George P. Teegarden, for more than 20 years a wholesale grain dealer here, died at his home in Columbus July 7. Had he lived until July 11 he would have been 92 years old. Mr. Teegarden retired from active business in 1920.

Chickasaw, O.—On July 6 the Chickasaw Milling Co. plant was totally destroyed by fire. Ivo J. Grieshop is manager of the business. The mill will be rebuilt. Meanwhile, temporary quarters have been set up in a former storage building by Mgr. Grieshop.

Ankenytown, O.—Improvements in local feed grinding plant of H. W. Updike, Fredericktown, O., will include a Model 24 Nickle two-roll Ear Corn Crusher-Feeder for operation ahead of a Jay Bee hammer mill. Power plant includes a No. 72 Fairbanks-Morse Gasoline Engine.

Plymouth, O.—More than 500 persons visited the Plymouth Elvtr. Co. elevator on its opening day July 10, to make the acquaintance of the new management, T. J. Ratcliffe, and Mrs. Ratcliffe, and to inspect the facilities and stock of the plant. Souvenirs were distributed commemorating the occasion, and free grinding was offered farmers.

Hebron, O.—H. G. Roberts and T. J. Campbell of Bucyrus are the new owners of the C. A. Pence elevator. The new firm will operate under the name of Roberts & Campbell, and will conduct a general elevator business including the handling of grain, hay, feed, coal, fence, tile, seed, wool and farm implements. Both men are experienced elevator and grain men.

Blanchard (Dunkirk p.o.), O.—Earl E. McConnell has purchased the grain elevator at Blanchard Station on the New York Central Railroad and will operate it in connection with elevators at McGuffey and Alger, which he has operated for the last eight years. The local elevator is being completely overhauled and will be ready to handle wheat this harvest. A modern feed mill is being installed and a stock of feeds carried.

Fostoria, O.—The Northwestern Ohio Farmers Grain Dealers Ass'n held its annual "soybean day" here July 8. The convention program opened with an inspection of the soybean plant of Swift & Co.; dinner was served at 6 p. m. in the Fostoria Country Club. C. S. Latchaw was chairman of the meeting, which was called to order at 8 p. m. Speakers included S. D. Kendall, general manager of Swift & Co.; Guy Smith, Sugar Ridge; O. J. Jeffreys, Paulding; H. H. Hampton, vice-pres. of the Nickel Plate Railroad Co., Cleveland; and M. D. Howell, county agent, Tiffin, O.

OKLAHOMA

Cushing, Okla.—Lyman E. Hancock, 69, a former grain broker, died July 17.—P.J.P.

Okeene, Okla.—The Okeene Milling Co. sustained an electrical damage loss at its plant recently.

Blanchard, Okla.—The Chickasaw Elvtr. & Warehouse Co. has purchased a 16½-ton, 22x9 ft. Bonded Truck Scale.

Hardesty, Okla.—The Kimbell Milling Co. of Fort Worth, Tex., has leased the local elevator formerly operated by Hopkins & Mason.

Mouser (Guymon p.o.), Okla.—Dean Begole is new manager of the Consumers Co-operative Co. elevator, operated by the W. B. Johnston Grain Co. of Enid.

Adams, Okla.—The W. B. Johnston Grain Co. has placed Jake Wickert in charge of its local elevator interests as manager of the elevator formerly operated by Hopkins & Mason.

Guymon, Okla.—Tot Smith will manage the W. B. Johnston Grain Co. elevator interests here, formerly operated by Hopkins & Mason.

Hooker, Okla.—The Hopkins & Mason line of elevators, which includes their interests here and at Monser and Adams, also the old wheat Pool elevators here, as well as at Guymon, Tyrone and Mouser, have been turned over to the W. B. Johnston Grain Co. of Enid for operation; the company's elevator at Hardesty was leased to the Kimbell Milling Co. of Fort Worth, Tex. E. W. Hopkins and J. H. Mason, who erected the elevators, will continue in the cattle buying and farming business. John Wright, of Fargo, Okla., will have charge of the two elevators here. The W. B. Johnston Grain Co. has terminals at Enid, Alva and Kingfisher.

PACIFIC NORTHWEST

Elberton, Wash.—The Garfield Union Warehouse Co. is building an elevator here.

Garfield, Wash.—The Garfield Union Warehouse Co. is remodeling its local elevator.

Prosser, Wash.—The grain elevator at the Edgar Hamilton ranch has been completed.

Lewiston, Ida.—Kerr-Gifford & Co. has opened its new office in the new Ketenbach Building.

Waukon, Wash.—The Edwall Grain Growers are building a 45,000-bu. addition to their local elevator.

Drummond, Ida.—The Sperry Flour Co.'s new elevator has been completed and is ready to receive grain.

Portland, Ore.—Facilities of municipal terminal No. 4 will again be available for loan storage of wheat this year.

Waterville, Wash.—The Waterville wheat crop will be handled by the Centennial's new 75,000-bu. elevator, to be managed by Myron Estil.—F. K. H.

Bend, Ore.—The Deschutes Farmers Whse. Co. feed and seed plant was destroyed by fire July 5. The loss totaled around \$50,000 Mgr. Don Stuart stated.

Sulphur (Connell p.o.), Wash.—The Connell Grain Growers equipped its new elevator with a Winters Direct Connected Geared Head Drive with Fairbanks-Morse Motor.

Lakeside (Kennydale p. o.), Wash.—The Scott Feed Co. has opened for business in the Kay Lumber & Hardware Co. building at Lakeside Center. Earl C. Scott is manager.

Whelan (Pullman p.o.), Wash.—The Pullman Grain Growers, Inc., is building a 60,000-bu. elevator here, to be equipped with a 15-ton truck scale and powered by electric motors.

Monmouth, Ore.—The Monmouth Co-op. Creamery & Warehouse has installed a new four screen cleaner in the local warehouse which will speed up handling of all seeds.

Colfax, Wash.—The Colfax Grain Growers installed a Howell Aero-Flax Telescoping Pneumatic Truck Lift and a direct connected geared head drive with 10 h.p. Fairbanks-Morse Motor in their new plant.

Latah, Wash.—The Wallace Grain & Pea Co. has purchased the Wood warehouses. Arthur Klevano is the new warehouse manager. A pea cleaner and a feed mill will be installed in the warehouses.—F.K.H.

Lacrosse, Wash.—Lacrosse Grain Growers, Inc., have authorized redemption in November of the 1034 series of certificates of interest amounting to more than \$8,000, according to C. M. Cook, manager.—F.K.H.

Hartline, Wash.—After an extended delay, work was resumed late in June on the 100,000-bu. bulk grain elevator of the Sperry Flour Mills. The scale was installed, the office built and machinery is being set up.

Portland, Ore.—Arch Ryer, formerly manager of the Farmers National Grain Corp. on the Pacific Coast, and well known in the grain trade, is critically ill in a Portland hospital. He has been in poor health for two years.

Port Hover (Hover. p. o), Wash.—The new 18,000-bu. grain elevator being built by Bill Blair of Western Horse Heaven on the Columbia River was destroyed by fire of unknown origin June 30. The building was nearly completed and most of the machinery had been installed. Mr. Blair, one of the largest wheat growers in Horse Heaven, was planning to ship his wheat by barge in the future. The elevator was partially insured.

Bluestem, Wash.—The Centennial Flour Mills of Spokane, Wash., is improving its local elevator with a Howell Aero-Flex Telescoping Pneumatic Truck Lift, roller bearing boot, safety man lift, bin spouting and Calumet Cups.

Wilbur, Wash.—The Grain Growers Warehouse Co. closed its fiscal year with declaring an 8 per cent dividend. C. W. Kunz was retained as manager. The company was organized in 1909. It has a grain storage capacity of 365,000 bus.—F.K.H.

Portland, Ore.—I. C. Sanford, 80, Continental Grain Co., coarse grain department, and pioneer of the grain and milling business of the Pacific Northwest, is ill in a local hospital. Mr. Sanford formerly was manager of the Northern Flour Mills.

Spokane, Wash.—At a recent meeting of the North Pacific Grain Growers, A. R. Shumway of Milton, Ore., was re-elected president, Harry Goldsworthy of Rosalia, vice-pres.; and Troy Lindley, Dayton, re-elected sec'y-treas. A. F. Sutton was retained as general manager.

Zumwalt (Pomeroy p. o.), Wash.—The Zumwalt Warehouse Co. has leased its warehouses here and at Dodge to W. A. Minton, who is now in charge. The warehouses formerly were operated by L. F. Hopkins who will be in charge of the Centennial Flouring Mills elevator in Pomeroy.

Coulee City, Wash.—The Farmers Union Grain Co.'s new elevator is ready to take in wheat. A stone office building is being constructed between the elevator and the warehouse and a 30-ton 10x34 ft. Howe Scale with hydraulic hoist, is being installed in the driveway. Roy Goodall is manager.

Garfield, Wash.—The White Mill Feed Co., formerly known as the Garfield Feed & Fuel, opened for business July 15. The mill is located on the Union Pacific tracks. Art Sherman, proprietor, announces he is ready to take care of cleaning and treating, rolling and hammering, storage, and will carry a full line of feeds.

Lewiston, Ida.—The F. C. A. rejected bids for the sale of its local grain elevator, the offers being considered too low, and the properties were released to the Lewiston Grain Growers, Inc., who for the last several years had leased the property which includes a concrete elevator and sack warehouse on Snake River Ave.

Independence, Ore.—The addition to the elevator of the Monmouth Co-op. Creamery & Warehouse has been completed. The new building has two floors for grain storage, each 58x58 ft. square. The chopper was placed in the building to make room in the elevator for installation of a new cleaner, thus speeding up service of receiving grain during the harvest.

Jerome, Ida.—R. G. Freeman, for the last 15 years associated with the Jerome Milling & Elvtr. Co., resigned July 6, to take over active management of the I. B. Fritzer Warehouse Co., which he recently purchased. Bryan Henry, who has been employed at the Mill & Elvtr. for the last several years, has succeeded Mr. Freeman as manager there. Mr. Fritzer will remain with Mr. Freeman for a few months after which he will devote his time to his farm and mining interests.

Seattle, Wash.—Indorsing the regime under which their organization's activities have become increasingly important, members of the Seattle Grain Exchange have re-elected Gordon T. Shaw as president and S. Ursic as manager. C. W. Nelson was elected vice president, A. G. Tuohy sec'y and D. G. Hughes, treasurer. Officers' reports showed the exchange to be in a strong position, maintaining a high standard of service, and to have had a good volume of business during the first half of 1940.—F. K. H.

PENNSYLVANIA

Newport, Pa.—Edward Freed is building a new feed mill. He will hold a grand opening celebration upon its completion.

Belleville, Pa.—The Belleville Flour Mill is building a concrete incline onto which loose wheat can be dumped from trucks and conveyed into the mill's basement from where it will be elevated to storage bins above. The mill's trucks will load the grain at the farms, hauling it to the mill. The milling company has purchased one of the car barns from the K. V. R. R. and is equipping it for the storage of fertilizer. Walter Foltz & Sons are owners and operators of the mill.

Atlantic, Pa.—Recent improvements in the feed grinding department of the local G. A. Freyermuth Elevator includes a Model 24 Nickle two-roll crusher-feeder. This crusher feeds ear corn and small grain to hammer mill.

SOUTH DAKOTA

Beresford, S. D.—Milt Hewer of Letcher is new assistant at the Farmers Co-op. Elevator.

Kingsburg, S. D.—The Kingsburg elevator, which has been closed since early last fall, recently was re-opened.

Whitewood, S. D.—The Tri-State Milling grain elevator has been opened for the season with Roy Termes in charge.

Mitchell, S. D.—I. L. Demaray, manager of the Farmers Grain & Coal Co. here, died July 8 following a lingering illness.

Beresford, S. D.—A new annex is under construction at the Fruen-Rasmussen grain elevator. It will be used for storage.

Winfred, S. D.—Mr. Herder of Clark has taken over the management of the National Atlas Elevator, succeeding Roy Kneisel.

Rockham, S. D.—Jerome Clark is the new manager of the F. H. Peavey & Co. elevator, formerly the National Atlas Elevator.

Mitchell, S. D.—Dee Carlson has been named manager of the Farmers Grain & Coal Co. elevator, succeeding the late I. L. Demaray.

Columbia, S. D.—The Farmers Elvtr. Co. is being equipped by T. E. Ibberson with a new 20-ton Soweigh Motor Truck Scale with 28x9 ft. platform.

South Shore, S. D.—The Monarch Elevator here has been consolidated under the new firm name, F. H. Peavey & Co., and will be operated by J. R. Schultz, the present manager.

Groton, S. D.—The Bagley Elvtr. Co. elevator was saved from destruction July 4 about 6:30 p. m. by the timely discovery of a blaze under the building. Volunteer firemen hastily summoned, put out the fire with only nominal damage resulting.

Frankfort, S. D.—Sale of the Frankfort Mill & Elvtr. Co., now in receivership, was set aside by Judge Frank R. Fisher in circuit court recently and the sale to the Frankfort Elvtr. Co. at a higher price was authorized. The previous sale was to South Dakota Wheat Growers Ass'n, leasing the mill now for \$2,375. Creditors objected to this sale. The present sale price is \$3,000.

SOUTHEAST

Jacksonville, Fla.—The Wallace Grain Co., Inc., has been incorporated; 1,000 shares, \$10 par value; W. A. Wallace, J. C. Wallace, H. Jones, Jr., directors.

Harrisonburg, Va.—The large mill building of the Rockingham Feeds, Inc., was destroyed by fire July 7. Water and smoke damaged more than 300 tons of feed stored in the warehouse. The loss was largely covered by insurance.

Millsboro, Del.—John A. Cordrey installed a No. 3 Kelly Duplex Vertical Feed Mixer, 1½-ton capacity, with motor drive.

Burlington, N. C.—Acme Feed Co. recently installed a No. 3 Kelly Duplex Vertical Feed Mixer, 1½-ton capacity with motor drive.

TENNESSEE

St. Joseph, Tenn.—The St. Joseph Milling Co. recently installed a new roller mill and hammer mill.

Nashville, Tenn.—William Robert Coleman, 56, office manager for J. R. Hale & Sons, died July 11. He had been with the Hale grain firm in Murfreesboro, Tenn., for 10 years prior to coming to Nashville in 1920.

TEXAS

Gainesville, Tex.—Virgil Keel, well known in the grain trade, died recently.

Kingsville, Tex.—The Kingsville Milling Co. has been organized, capital stock, \$25,000; incorporators, Alice G. K. Kleberg, Saesar Kleberg, A. L. Kleberg.

Wichita Falls, Tex.—The J. C. Hunt Grain Co. elevator has been purchased by Judd Grain Co., of Vernon, Tex. The name of the 500,000-bu. plant will be unchanged under the new operators. The Judd concern owns elevators at Petrolia and Dundee besides its plant at Vernon which it has operated for about 11 years, and also mercantile enterprises at Vernon and here.

UTAH

Nephi, Utah.—The Juab County Mill & Elvtr. Co. is erecting additional concrete storage bins and installing new machinery at its plant. The storage capacity of the elevator will be increased 25,000 bus. New machinery is being installed in the mill.

WISCONSIN

Boscobel, Wis.—Economy Warehouse has installed a new ½-ton feed mixer.

Edgerton, Wis.—Frank McCall has opened the Edgerton Feed & Seed Mill here.—H.C.B.

Superior, Wis.—New equipment at the Daisy mill will be set into motion on Aug. 1.

Fennimore, Wis.—Zimmerman & Stitzer are building a new feed mill and warehouse.

Dodgeville, Wis.—Plans have been approved by the state for a feed warehouse to be erected by P. W. Hennessey.—H.C.B.

Baldwin, Wis.—The Farmers Co-operative Produce Ass'n is installing two new-feed grinding mills. Joe Huenink is manager.

Sister Bay, Wis.—Fire believed to have been caused by spontaneous combustion the night of July 10 destroyed the Sister Bay Feed Mill operated by Elmer Berns.

Fall River, Wis.—The Fall River Elvtr. Co. has been organized, 100 shares, n.p.v., to deal in hay, grain, dairy feeds, etc. William Olday, Oscar Christianson and M. S. Karnes.

Waterloo, Wis.—Ed Holzhuetter, owner of the Waterloo mill, has purchased the Baby Rice Popcorn Co. and will operate the popcorn business as well as the mill.—H.C.B.

Manitowoc, Wis.—When a rope pulley stuck, friction set fire to the rope and pulley in the cupola of Elevator B of the Norris Grain Co., the morning of June 28, but discovered in early stages, the blaze was extinguished by firemen before much damage resulted.

Francis Creek, Wis.—Hundreds of persons turned out for the celebration which marked the opening of Muench's new elevator July 14. Entertainment as well as refreshments was furnished visitors and dancing was offered in the afternoon and evening.—H.C.B.

Hayward, Wis.—The New Richmond Roller Mills structure was destroyed by fire July 12, cause of which was ascribed to spontaneous combustion in the grain bins. The frame building and its contents were a complete loss. Andrew Eaton was manager of the plant.

LaCrosse, Wis.—The Farm Service Co.'s \$35,000 grain elevator and warehouse is expected to be completed early in September. The warehouse will provide about 4,000 ft. of storage space while the elevator will have a capacity of 8,000 bus. of grain. The building will be equipped with a 40-h.p. hammer mill, a feed mixer and a grading machine.—H.C.B.

Wisconsin Rapids, Wis.—Dan W. McKercher, manager and founder of the McKercher Milling Co., sold that concern to the Farm Service Co. of Minneapolis, a subsidiary of General Mills, Inc., the new owners taking over operation of the plant July 1. Ellsworth Hawley of Minneapolis was placed in charge of the business as manager. The McKercher Milling Co. has been dissolved but the company's Mosinee warehouse will be retained by Mr. McKercher. The Plover warehouse was included in the sale transaction. The Farm Service Co. will continue to manufacture the McKercher brands as well as serve for a distributing center for General Mills products. Robert McKercher will be retained as assistant manager at the local plant.

MILWAUKEE LETTER

Edward H. Dadmun, 85, in the grain business here since his youth, died July 18 at the home of his son. A native of Wellesley, Mass., Mr. Dadmun was associated with Robert Elliot in the grain business for many years and later with L. L. Runkle.—H.C.B.

The commission merchants at the Milwaukee Grain & Stock Exchange entertained at a stag steak dinner for all buyers in the market at the Milwaukee Athletic Club July 2. Problems concerning the marketing of the new barley crop were discussed. It was decided that similar get-together meetings will be held at regular intervals in the future.

Guy H. Coons, well known to the feed trade thruout Wisconsin, has opened a brokerage office here and will specialize in the handling of black strap molasses and crushed oyster shell. He has been associated with Geo. K. Keiser, local sugar broker, for the last 12 years and before that was Wisconsin representative of the Gulf Crushing Co.

A barley meeting will be held in Milwaukee under auspices of the Milwaukee Grain & Stock Exchange Sunday, July 28, starting at 9 a. m.; lunch and refreshments at noon at Schlitz Brewing Co. At the evening meeting the following program of talks and discussions will be carried out: "1940 Barley Crop Prospects," by J. G. Dickson; "Problems of the Commission Man," by Milwaukee commission merchant; "Problems of the Maltsters," by Milwaukee maltster; the "Inspection Procedure and Terminal Market and Its Relation to Buying Barley at Country Points," F. A. Cummings; "Northwest Crop Improvement Ass'n," H. O. Putnam; illustrated talk on barley quality, and "Following the Crop from Field to Consumer," W. B. Combs; discussion, led by county dealers and threshermen. Barley meetings have been held this month, sponsored by Madison in charge of Professors R. E. Vaughn and G. M. Briggs, as follows: July 15, at Agricultural School Auditorium, Rochester; July 16, Juneau; July 17, Green Bay, at Asylum farm; July 18, Waldo, at Asylum farm.

WYOMING

Lovell, Wyo.—A truck went thru the scale platform recently at the Big Horn Co-operative Marketing Ass'n elevator.

A booklet supplementing the handbook on "Shipment of Samples and Advertising Matter Abroad" has just been published by the U. S. Dept. of Commerce.

Shippers' Certificate of Weight

for use in advising receivers of the amount and grade of grain loaded into a car. Especially adapted for filing claims for Loss of Weight in Transit. Each certificate gives: "Kind of scale used; Station; Car Number and Initials; Shipper's Name;—lbs. equal to—bus. of No. —; Date scales were tested and by whom; car thoroughly examined and found to be in good condition and properly sealed when delivered to the ————R. R. Co.; Seal Record, name and number, sides and ends; marked capacity of car; date; name of the weigher." On back is a form for recording the weight of each draught.

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Field Seeds

Bend, Ore.—The Jenks-White Seed Co. suffered loss by fire July 4.

Pella, Ia.—Martin DeJong of the DeJong Floral & Seed Co., died June 15.

Fremont, Neb.—The Yager Seed & Nursery Co. is building a warehouse.

Winona, Minn.—The Northern Field Seed Co. is establishing a new cleaning plant in the Griesel building.

Santa Barbara, Cal.—Fred F. McCrea, proprietor of the McCrea Seed Co., died June 29 at Ogden, Utah.

New York, N. Y.—David Platt has succeeded Wilbur Meyer as manager of Max Schling Seedsmen, Inc.

Mount Vernon, Wash.—A seed and feed store building 60x120 ft. is being erected for John Lindbloom, at a cost of \$6,000.

Early, Ia.—The Mausten Seed Co., of Santa Fe, Mo., has 37 stripping machines here harvesting 3,000 acres of blue grass seed.

Albany, Ore.—The burned seed plant will be rebuilt immediately by the Chas. H. Lilly Co. The new building will be fireproof and air conditioned.

Webster, S. D.—Russell M. Lewis of Brookings has taken over the management of the Farm Service Stores, doing a seed cleaning and sales business.

Rigby, Idaho.—The Associated Seed Growers, Inc., is remodeling its Keeney plant here to handle seed corn and beans as well as peas shipped in from southern Idaho.

New Baden, Ill.—We have speeded up our clover seed cleaning facilities with installation of a second seed elevating leg in the seed cleaning room.—B. J. Holtgreve, New Baden Milling Co.

Brookings, S. D.—The annual meeting of the South Dakota Seed Dealers Ass'n will be held here July 26. Four addresses are scheduled by able speakers, followed by an afternoon tour thru the plots of the state experiment station.

Gresham, Ore.—S. B. Hall, extension agent of Multnomah County, has announced that instead of the agricultural extension service, as in the past, distributing hairy vetch seed for use as cover crops under the A.A.A. program, the sales will be made thru seed dealers.

Nokomis, Ill.—The Nokomis Equity Elevator Co. managed by Roy N. Phillips, has built a 16x34 ft. addition on the end of its warehouse and fitted it with a seed cleaner, a double stand of seed elevator legs, garners, sacking spouts, and three storage bins, with storage room for sacked seeds below them.

College Station, Tex.—A short course for seed analysts is being held at the A. and M. College July 23 to 26. Each day is divided into periods so that lectures and sample analysis may be alternated conveniently. Special attention is given to the important varieties of wheat, oats and sorghum as well as pasture grass mixtures.

Winnipeg, Man.—The cereal com'ite of the Canadian Seed Growers Ass'n has recommended that whenever new varieties are produced the first distribution of the foundation seed be given to seed growers, members of the association, and only to farmers in general when there were more stocks than the seed growers themselves could handle for multiplication.

Shenandoah, Ia.—A one-fourth interest in the May Broadcasting Co. has been sold by the Earl E. May Seed Co. to the Central Broadcasting Co., operator of WHO at Des Moines, and the two stations will co-operate merely in a business way, KMA getting more programs.

Ohlman, Ill.—A seed cleaning department has been installed in the warehouse and soy bean storage unit of the Ohlman Grain Co. Inc., which is managed by A. C. Robertson. A double stand of elevator legs, furnished by Union Iron Works, for handling seed to and from the cleaner and into garner bins and sacking spouts makes its operation convenient. Numerous sieves make the cleaner adapted to cleaning everything from seed soybeans to clover seed.

Corvallis, Ore.—The first farm sale of Austrian winter field pea seed in Oregon thru the A.A.A. has just been completed in Washington county. Ritchey Bros. of Forest Grove turned over 600 bags, or one carload of peas which gave a test of 98 per cent purity and 90 per cent germination, thus qualifying for the top guaranteed price of three cents per pound. The peas will be shipped to all the southern states for use this fall in seedling cover crops on southern cotton farms.—F.K.H.

Buffalo, N. Y.—The Whitney Seed Co., Inc., has been organized with a capitalization of \$100,000 as a wholly-owned subsidiary of the Craver Dickinson Seed Co. to take over the properties and trade names of the Whitney Eckstein Seed Co., which is in process of dissolution, Pres. Elmer L. Townsend of Craver Dickinson and the Whitney Seed Co. has announced. Ignatz Eckstein, who for the last four years has been president of the Whitney Eckstein Co., has retired from active business. One of the oldest wholesale seed firms, it was established in 1899. Fred G. Mock, who has been

general manager of Whitney Eckstein, is vice-pres. of the new corporation; George M. Jeurgens, treas., and Conrad P. Hart of Cleveland sec'y. The Whitney Seed Co. has taken over the Buffalo warehouse of Whitney Eckstein.—G. E. T.

Seed Analysts in Convention

The Ass'n of Official Seed Analysts of North America held its annual convention June 18, 19 and 20, at Auburn, Ala., with an attendance of 55 analysts employed by private firms as well as by governments of the states and the U. S. Dept. of Agriculture.

DR. R. H. PORTER, Ames, Ia., president, called the meeting to order.

W. H. WRIGHT, Ottawa, Canada, presented the first section of "A Handbook on Seed Testing," which is being published by the Ass'n of Official Seed Analysts.

The proposed "Uniform State Seed Law" was discussed and after a few minor changes was approved by the analysts.

Interesting papers bearing on the work of the analysts were read.

Officials elected for the ensuing year are: Pres., C. N. McIntyre, Columbus, O.; vice pres., F. A. McLaughlin, Amherst, Mass., and sec'y-treas., W. A. Davidson, Washington, D. C.

New Alabama Seed Law

Under the Seed Law of Alabama effective July 1 worthless seed may not be sold or given away for planting purposes. Worthless seed is as follows: (a) Seed containing in excess of 2½% of the total weed seeds; (b) seed containing 500 noxious weeds per pound of pure seed; (c) no agricultural seed excepting grasses, unscarified legumes, and garden seeds listed in the standards for germination, shall be offered for sale if the germination percentage is below 60; (d) mixtures of varieties of oats may not be sold for planting purposes.

Seeds containing more than 200 noxious weeds per pound shall be labeled "excessive noxious weeds" in red ink and in not less than 8 point type.

Trucks and other motor conveyors transporting seed on the public highway shall have available for examination at any time a bill of lading or way bill or other delivery re-



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ceipt showing (1) the name of shipper or party from whom purchased, (2) the name and address of the party to whom the seed is to be delivered, (3) the kind and amount of each separate kind of seed, and (4) the name of the truck driver and truck line making delivery of the seed.

Michels Grass

Michels grass is a new plant brought into being by C. A. Michels of the agronomy department of the University of Idaho by crossing Mosida wheat with the giant native bunch rye grass. The rye grass is a vigorous, drought-resistant, coarse perennial.

The aim of the plant breeder was to produce a plant having the palatable and nutritive qualities of wheat and the perennial character of the rye grass. The resulting plant was named Michels grass after its creator. It possesses the desired characteristics in amazing degree.

It is a rapid and luxuriant grower, under favorable conditions quickly reaching five or more feet in height. It produces seed closely resembling rye in both appearance and quality. Continued development on the part of its breeder and growers seems to insure the permanent fixity of its perennial habit.

Germ Transmits Corn Quality

By R. R. ST. JOHN before Chicago Agricultural Club

Agricultural engineers who designed corn planters never dreamed that a botanist who experimented with the silks and tassels of a corn plant could "gum up the works," at corn planting time. Agricultural engineers believed that corn breeders had some of the necessary qualifications for the job, but were amazed and almost "broke out in hives," when a corn breeder would insist that kernels of all shapes and sizes could be called excellent seed corn.

So far as we now know, very few of the seed characteristics which we can see with the eye are at all closely related to yield, or standing ability in hybrid corn. These fine qualities are transmitted thru the germ and not by the shape or size of the kernel. In corn, as in other plants and animals, the hereditary qualities are carried from one generation to the next in the male and female germ cells.

When the hybrid corn industry started off with a "bang," both the engineers and corn breeders became fussed when farmers tried to force round kernels thru flat slots. If awards had been given to farmers for their "barnyard oratory," in those days when hybrids were planted for the first time, the collections of medals would now decorate a modern seed house.

When the problem was really understood, the engineer, the farmer, and corn breeder began to exchange ideas, and the planter plate requirements and grading machinery soon reached a high degree of perfection. If we had it to do over again, and knew what was in the future, somebody would have practiced on open pollinated corn.

It is expected that future corn breeding programs will become more technical and will stay in the hands of advanced students and experienced corn breeders. Since public funds may not always be adequate to solve all the problems that arise from day to day in a business that gives service to every corn farmer in the nation, it is believed that commercial seed companies will find it necessary to carry on some research activities to keep the industry moving along at quick step.

The fine place that hybrid corn may enjoy tomorrow will not be the brilliant achievement of a selected few, but be a contribution from many, including—good business, scientific research, good advertising, and a constructive educational program.

Cleaning and Treating Farmers Seed

Seed cleaning service is becoming an important department in the country elevator business. A period of educational work has taught the farmers that they cannot expect good crops from poor seed. This has created a demand among them for seed cleaning service, and country elevator operators are rapidly equipping their plants to clean seed thoroly.

Caught in the demand are seed grains, as well as grass and legume seeds. Cleaning of seed soy beans kept the screens shaking on cleaners in elevators all thru the soybean belt in the early months this spring. Seed wheat held for fall planting is expected soon to begin moving to the elevators for cleaning.

Along with cleaning goes treating service to protect the seed from disease. Elevators equipped with treating machines are reaping three profits. One comes from the charge for the service, a second from sale of the Ceresan and copper carbonate dusts used, a third from the increased yields from treated seed.

Order Exempting Forage Seed Plants

On application of the Oregon Feed Dealers Ass'n the administrator of the Wage and Hour Division has granted an exemption from the maximum hours provision, pursuant to Section 7 (b) (3) of the Fair Labor Standards Act of 1938 and Part 526 of the Regulations, to cleaning plants engaged primarily in the cleaning and preparing of perennial ryegrass, common ryegrass, Hungarian vetch, hairy vetch, chewings fescue, Austrian Winter Peas, bent grass and Ladino clover seed crops as an industry of a seasonal nature.

In the above, the term "cleaning plants primarily engaged in such cleaning and preparation," i. e., the cleaning and preparation of perennial ryegrass, Hungarian vetch, hairy vetch, chewings fescue, tall fescue, Austrian Winter Peas, bent grass and Ladino clover seed crops is understood to include those cleaning plants in which the cleaning and preparing of such seed crops either individually or in combination make up 75 per cent of their cleaning and preparing operations.

Suspension of Seed Labeling

The U. S. Dept. of Agriculture on July 5 suspended requirements of the Federal Seed Act with respect to labeling new-crop Kentucky bluegrass and bentgrass seed for germination for the period from Aug. 5 to Sept. 30, 1940. Suspension of the requirement has been made to facilitate the movement of 1940 seed of these grasses to areas where it may be needed for fall seeding to supplement carryover stocks, which are expected to be below normal.

The eight-weeks' suspension applies only to labeling for germination on shipments of new-crop seed of these two grasses, it was stated. All other labeling requirements under the Act remain in effect.

Seed of Kentucky bluegrass and bentgrass goes thru a rest period immediately following harvesting. With carryover seed from the 1939 crop below normal in some areas, the holding of new-crop seed thru this rest period for a normal germination test before shipping would delay distribution beyond the time when the seed could be used for fall seeding.

Imports of Seeds

Imports of agricultural seeds during June and during the 12 months prior to July 1, compared with like periods a year earlier, as reported by the U.S.D.A., have been as follows, in pounds:

Kind of Seed	—June—		July 1 to June 30	
	1940	1939	1939-1940	1938-1939
Alfalfa	600	2,000	3,376,400	3,263,600
Barley	.....	.....	202,600	.....
Bean, Mung	145,000	.....	383,500	.....
Bentgrass	9,300	1,800	155,000	136,000
Bluegrass—				
Annual	.....	.....	4,100	12,900
Canada	.....	.....	25,500	13,900
Rough	.....	44,000	857,300	710,000
Wood	.....	.....	2,900	4,900
Brome, smooth	3,600	.....	3,867,600	2,189,200
Buckwheat	900	.....	900	.....
Clover—				
Alsike	.....	.....	440,500	7,100
Crimson	1,100	50,600	5,446,200	4,707,100
Red	100	.....	137,800	598,300
Suckling	.....	1,400	34,700	56,300
White	.....	12,100	751,900	2,384,900
Corn	3,700	.....	61,900	.....
Dogtail, crested	2,200	.....	14,500	2,000
Fescue—				
Chewings	204,100	53,900	1,052,300	885,900
Meadow	.....	2,200	26,600	78,100
Other	800	100	135,400	331,500
Flax	55,000	.....	55,600	.....
Grass—				
Bahia	.....	900	44,100	21,600
Carpet	.....	.....	200	12,400
Dallia	3,800	1,100	106,400	144,300
Guinea	.....	.....	60,000	28,200
Molasses	.....	.....	88,800	8,800
Orchard	.....	.....	287,800	1,726,700
Rescue	32,700	2,400	80,800	.....
Rhodes	.....	1,000	91,800	91,800
Velvet	.....	.....	7,400	24,300
Kudzu	.....	.....	9,300	7,500
Lupine	.....	.....	.....	17,400
Medick, black	.....	.....	107,200	64,100
Millet,				
Japanese	.....	.....	801,100	.....
Mixtures—				
Alfalfa and alsike	.....	.....	15,900	.....
Alsike and timothy	.....	.....	34,300	32,700
Alsike, timothy and red clover	.....	.....	.....	7,400
Clover	.....	9,700	.....	9,700
Grass	.....	.....	75,400	300
Sweetclover and wheatgrass	.....	.....	1,500	.....
Oat	204,900	.....	10,801,600	.....
Proso	.....	.....	6,600	.....
Rape, winter	120,000	507,900	5,401,100	7,348,300
Rye	.....	.....	6,700	.....
Ryegrass—				
Italian	.....	.....	292,200	23,500
Perennial	5,600	35,200	661,200	622,100
Sourclover	.....	.....	35,000	.....
Soybean	.....	.....	2,900	.....
Sweetclover	74,200	3,604,000	10,292,500	.....
Timothy	.....	100	16,200	1,600
Vetch—				
Common	.....	.....	249,000	1,003,700
Hairy	66,600	826,900	2,751,500	6,498,700
Wheat	3,300	.....	287,700	.....
Wheatgrass—				
Crested	2,400	400	1,454,400	560,200
Slender	131,700	82,600
Total	833,300	1,658,400	44,470,800
			44,470,800	44,095,000

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Nebraska Dealers Inspect County Wheat Test Plots

The last of a series of 22 wheat meetings sponsored by the Nebraska Grain Improvement Ass'n was held in the panhandle of western Nebraska the past week, a few days in advance of harvest. The meetings were held at the site of each 100 farmers' test plots planted on a county basis. Only four tests, all in south central Nebraska, were in such poor condition due to drouth that meetings were not held, according to Glenn H. LeDioyt, Secretary of the Improvement Ass'n.

Dr. K. S. Quisenberry of the United States Department of Agriculture stationed at Lincoln appeared at most of the meetings and expressed earnest approval of the way farmers were taking hold of the test plot program to aid them in learning if their wheat was of a pure and recommended variety. Attendance of grain men and farmers averaged 75 per meeting for the entire state. A total of 1,650 wheat producers attended the 22 meeting series.

Chambers of Commerce in Wahoo, Seward, Kearney and Oshkosh held noon day luncheons for farmer guests in connection with the field days. At Sutherland, Nebraska, the Commercial Club donated prizes to the farmers coming the longest distance to the meeting. At the Dawes county test the Chadron Milling Co. awarded five sacks of flour as prizes at a drawing. Prominent grain men appeared at each meeting to discuss the demands of the market, while the Nebraska College of Agriculture was represented by either Dean W. W. Burr, Dr. F. D. Keim, Chairman of the Department of Agronomy, Dr. T. A. Kiesselbach, in charge of plant research, and extension agronomists D. L. Gross and G. T. Webster.

As was expected farmer interest in the wheat meetings was greatest where the wheat crop showed the most promise. In the eastern third of the state, the plots for the most part were in good condition, and the average attendance was slightly over 100 wheat producers. The Merrick, Webster, Kearney and Frontier plots failed completely,

while the Nockolls and Franklin tests were severely damaged by drouth. In Adams county the wheat plot, which did not germinate until late in February, was fully headed although extremely late. It showed the effects of a severe stem rust epidemic. The irrigated plot in Buffalo county was in excellent shape. In Dundey and Chase counties, located in the western part of the state, the adjoining fields were estimated to yield 25 bushels per acre, while the Dawes, Morrill and Garden county plots in northwest Nebraska were in fair to good condition. Spring wheat in this area did not look as promising as winter wheat.

At each meeting the farmers' samples were classified as seed wheat. In addition the yield tests which will be harvested for yield, seed, milling and baking comparison by the Nebraska College of Agriculture were observed. College agronomists discussed wheat varieties with the producers both from the standpoint of the grain trade and the farmer.

Another series of meetings is being planned just prior to seeding time in counties where the test plots failed. Stress will be laid on the importance of good seed at these meetings and farmers will be aided in securing seed of the well adapted high quality varieties such as Nebred, Cheyenne and Turkey.

Plant Breeding and Wheat Improvement

By JOHN H. PARKER, director, Kansas Wheat Improvement Ass'n, in a radio broadcast.

Shining examples of the value of hybridization or cross-breeding in wheat improvement are the varieties Marquis and Thatcher, among hard red spring wheats, and Tenmarq among hard red winter wheats.

Thatcher is a selection from the double cross [(Kanred x Marquis) x (Marquis x Iumillo)]. This seems a rather complicated "family tree," and so it is; Marquis of Canada, Kanred of Kansas and Iumillo, an Italian durum or macaroni wheat.

It is estimated that in the rust year of 1938, Thatcher wheat saved farmers in the 3 Prairie Provinces of Canada some 28 million dollars. Canadian plant breeders have produced several rust resistant varieties of spring wheat.

Tenmarq is earlier than its Turkey parent, has stiffer straw and produces higher yields. It combines the excellent milling and baking qualities of its winter and spring wheat parents. Tenmarq is now grown on 20 per cent or one-fifth of the wheat acreage in Kansas and is also a popular variety in central Oklahoma and in parts of Texas.

After the experiment station men have produced, tested and released these new varieties, there is still much to be done in getting them widely and quickly distributed among farmers, and in maintaining supplies of pure seed. In this important phase of wheat improvement, crop improvement associations sponsored by commercial interests, grain dealers and others, are playing an increasingly useful role.

The Canadian Crop Testing Plan, conceived and put into operation by Dr. L. H. Newman and Major H. G. L. Strange, and supported by the Searle Grain Co. and other leading Canadian grain companies is a model of efficiency. The Northwestern Crop Improvement Ass'n, with headquarters in Minneapolis, serves well the spring wheat states. In 8 counties of southern Indiana, Igleheart Brothers, Inc., of Evansville, have for 8 years co-operated with Purdue University in conducting a valuable soft red winter wheat improvement program.

A forward step in wheat improvement was recently taken in Kansas through the efforts of the Kansas Wheat Improvement Ass'n when about 50 millers and grain dealers in some 17 counties announced that during October, No-

vember, December of this year they will pay premiums of 2c per bushel for certified and Grade A seed of Turkey, Kanred and Tenmarq wheat, three varieties having the excellent milling and baking qualities desired and demanded by millers and bakers.

Contracts for export under the 1939-40 subsidiary amounted to 35,079,356 bus., as of July 1, of which 16,507,002 bus. represent wheat sold for export in the form of flour. The subsidy will be continued in 1940-41 on exports of wheat from the Pacific Northwest to China, Hongkong, Dairen, the Philippine Islands and Europe; and for exports of wheat flour from that area to China, Hongkong, Dairen and the Philippine Islands.

Grain Storage Receipts

A written receipt is indispensable to grain dealers who store grain for farmers. This receipt records the amount, kind, and grade of grain, and sets forth terms of storage as follows:

"Stored grain will be purchased at per bushel under the Chicago..... future, settlement to be made on or before 19....., at which date the grain described herein will be considered sold.

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"has sold.....bushels of.....at..... cents per bushel, to grade No....., to be delivered at.....on or before....." It also certifies that, "if inferior grain is delivered, the market difference at which such grain is selling on day of delivery shall be deducted. Any extension of time at buyer's option."

Originals are printed on bond paper, machine perforated so they may be easily removed; duplicates are of manila. All have spaces ruled on the back for recording each load delivered on the contract. Check bound, size 5½x8½ inches, 100 sets numbered in duplicate and supplied with 4 sheets of carbon paper. Order Form 10 DC Improved. Price \$1.10, f. o. b. Chicago. Wt. 1 lb.

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Glenn H. LeDioyt, Lincoln, Sec'y Nebraska Grain Improvement Ass'n.

Feedstuffs

Distillers dried grains production during June was 12,200 tons, against 11,200 tons in June, 1939, as reported by the U.S.D.A.

Brewers dried grains production during June was 10,600 tons against 11,800 tons during June, 1939, as reported by the U.S.D.A.

Converting straw into feed by digesting in caustic soda is a new process worked out by the International Chemical Institute, London, Eng.

The midsummer meeting of the Western Colorado Millers & Feed Dealers Ass'n was held July 20 and 21 at Mesa Verde National Park Lodge.

Jackson, Miss.—Ground delinted cottonseed hulls may continue to be used in mixed feeds in the state of Mississippi under a ruling by Commissioner Corley. A ruling will be announced against the use of bagasse from sugar cane, the effective date of which has not been set.

Fair Volume Inaugurates the Memphis Soy Meal Futures

The first soybean oil meal futures market in America was opened July 8 at Memphis, Tenn., with sales during the day of 1,500 tons on the Memphis Merchants Exchange.

Trades are in 100-ton units, the first transaction being at \$17 per ton, the price advancing later in the week.

May delivery was quoted at \$17.50 bid.

Feed Prices

The following table shows the closing bid price each week for October futures of standard bran and gray shorts, cottonseed meal and spot No. 1 fine ground alfalfa meal, in dollars per ton, and No. 2 yellow corn and No. 2 yellow soybeans in cents per bushel:

Minneapolis Spot				Kansas City			
	Bran	Midds		Bran	Shorts		
May 4.....	24.00	24.00		17.10	21.00		
May 11.....	23.50	23.50		17.60	21.50		
May 18.....	21.50	22.50		15.60	19.00		
May 25.....	20.00	22.00		15.10	19.00		
June 1.....	18.50	21.00		14.50	17.00		
June 8.....	17.00	19.75		14.00	17.25		
June 15.....	17.25	20.50		13.75	17.15		
June 22.....	17.50	22.00		13.95	17.40		
June 29.....	17.00	22.00		13.75	16.85		
July 6.....	16.00	20.50		14.00	17.10		
July 13.....	17.50	21.50		14.00	17.45		
July 20.....	20.50	22.50		14.40	18.00		

*St. Louis				Chicago			
	Bran	Shorts		Soybeans	Decatur Meal		
May 4.....	20.15	23.15		109¾	27.10		
May 11.....	20.70	23.25		108¾	27.50		
May 18.....	18.85	22.00		91	24.50		
May 25.....	18.15	20.90		89½	27.50		
June 1.....	17.50	20.00		85½	22.00		
June 8.....	17.00	19.00		81	22.00		
June 15.....	16.95	19.10		..	21.00		
June 22.....	17.15	19.50		81½	18.00		
June 29.....	17.00	18.75		78¾	..		
July 6.....	17.00	18.80		81¾	17.50		
July 13.....	17.25	19.25		82	18.50		
July 20.....	17.60	20.00		84½	18.50		

*St. Louis bran basis Chicago delivery; shorts St. Louis delivery.

Soft Hybrid Corn More Easily Digested

Steers fed on soft types of corn made slightly faster gains than those fed hard types, in a cattle feeding experiment at Iowa State College.

Five lots of choice yearling steers, eight steers to the lot, were used in the experiment. Each lot was fed for a period of 210 days on a type of corn selected for its hardness. The varieties included a special selection of Reid Yellow Dent—the softest corn in the experiment—and four hybrids, two of which were noticeably harder than the others in crushing tests.

According to C. C. Culbertson, in charge of the experiment, the steers fed Reid Yellow Dent gained an average of 2.17 pounds per day over the entire feeding period. On the two hardest hybrids, the steers made an average daily gain per head of 1.97 pounds in one lot and 1.8 in the other. The other two hybrids gave daily gains averaging 2.09 and 2.02 pounds, respectively.

Culbertson reported that the hybrid which produced the best "daily gain" was almost as soft as the open-pollinated variety.

The cost of producing 100 pounds of gain varied between lots. Those fed Reid Yellow Dent, the soft corn, put on 100 pounds of gain at a cost of \$8.34, figuring corn at 50 cents a bushel and other feed at current prices. The two lots fed "soft" hybrids made almost as economical gains, but in the two lots fed the harder types, it cost \$9.45 and \$9.84, respectively, to put on the same amount of gain.

Since there was practically no difference in the palatability in the varieties of corn fed, the differences in gain were probably due to variations in the percentage of corn digested, Culbertson said.

A careful check was made on corn salvaged by hogs that were allowed to run behind the cattle in the feedlot. Hogs picked up only 31 pounds of corn for each 100 pounds of gain made by the cattle fed the softest corn, whereas in the lot where the cattle made the lowest daily gain, the hogs salvaged 91 pounds, almost 3 times as much.

"If the feed picked up by the hogs is credited to the cattle," Culbertson said, "there's practically no difference in the thoroughness

with which hard and soft types of corn are utilized in the average farm feedlot."

Except for corn, the rations of all five lots were the same, consisting of weighted amounts of alfalfa hay, silage, linseed meal and minerals.

Volume of Feeds Sold in Minnesota

H. A. Halvorson, chemist in charge, in the 21st annual feed bulletin just issued, for 1939, reports that the number of distributors with registered products has increased from 35 names last year to 45 names this year. The number of products registered has also increased from 47 last year to 67 this year. Altho some improvement is noted with respect to filing registrations, there is still a lack of conformity with labeling requirements and with the definition for cod-liver oil so far as vitamin D content is concerned.

In 1939, 46 samples were assayed for vitamin D content compared with 41 samples in 1938. All products found deficient in relation to definitions and standards, or below the manufacturers' guaranties by initial tests were re-assayed at later dates. That there has been some improvement in quality may be noted from the fact that while 16 samples from a total of 41 were low in vitamin D potency in 1938, only 13 samples from a total of 46 were found deficient in 1939.

Commercial Feeding Stuffs Sold in Minnesota

Kind of Feed	—Estimated Tons—		
	1937	1938	1939
Alfalfa meals	111	221	917
Animal by-products	21,335	21,281	23,367
Mixed feed barley and barley by-products	16	.....	.....
Calf meals	502	1,881	654
Condimental feeds	259	264	676
Corn feed and hominy meal	705	374	134
Corn gluten feeds and meals	1,635	641	748
Corn and oats feeds (mixed)	1,323	1,246	2,958
Cottonseed meals	2,082	1,338	976
Dried beet pulp	1,250	2,405	2,219
Linseed meal	19,333	8,586	11,586
Milk products	778	1,447	1,729
Mineral mixture feeds	7,015	6,547	7,896
Miscellaneous feeds	9,702	8,446	6,570
Scratch feeds and miscellaneous poultry mashes	86,969	17,031	13,669
Chick starting and growing mashes .....	.....	20,935	25,940
Egg and laying mashes .....	.....	26,186	26,725
Turkey mashes .....	.....	9,469	14,492
Poultry mash concentrates	8,528	12,564	19,180
Proprietary feeds with molasses	15,235	10,199	15,836
Proprietary feeds without molasses	16,886	7,298	3,169
Proprietary feed concentrates .....	.....	1,510	2,478
Rye mill by-products	163	514	272
Screenings, ground	2,257	1,826	2,630
Wheat bran	42,405	43,105	39,982
Wheat standard middlings	45,068	56,540	47,407
Wheat flour middlings	7,512	10,837	5,989
Wheat red dog flour and low grade	6,804	4,413	5,664
Wheat mixed feeds	4,447	4,844	6,111
Total	302,320	281,948	289,974

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Diet and Reproduction

By H. J. SMITH before Ass'n of Southern Feed Control Officials

Feeding tests with small laboratory animals indicate that life is dependent on absorption from the intestinal tract of not less than 33 substances. These include glucose to supply energy; ten amino acids (arginine, histidine, leucine, isoleucine, lysine, methionine, threonine, tryptophane, and valine) for building body tissue; ten vitamins (carotene or vitamin A, thiamin, ascorbic acid, riboflavin, pantothenic acid, nicotinic acid, tocopherol, adermin, vitamin D; vitamin K) for catalyzing body chemical reaction; 13 minerals (sodium potassium, calcium, magnesium, zinc, iron, copper, manganese, cobalt, phosphorus, fluorine, chlorine, iodine) for building bones, teeth, hemoglobin, and other compounds and for regulating hydrogen ion concentration and osmotic pressure of body fluids; linoleic acid which seems to be necessary for the formation of one of the body fats. The list of 33 dietary essential substances may not be complete; it is highly probable that a few other minerals and vitamins will be added from time to time.

ESSENTIAL AMINO ACIDS.—The list of ten essential amino acids is based largely on feeding tests with rats conducted by Dr. W. C. Rose and associates at the University of Illinois using purified amino acids. From these ten acids the growing rat can synthesize all of its complex body proteins. Adult rats can maintain nitrogen equilibrium on diets lacking in five of the essential growth acids. (Lysine, leucine, histidine, arginine, phenylalanine are not essential.)

The formation of new protein requires all ten acids; the replacement of endogenous nitrogen loss requires only five acids. The amino acid requirement for reproduction in the rat has not been adequately studied. We do not have complete information on the amino acid requirement of large domestic animals, but feeding tests with cows now in progress at the University of Wisconsin show that growth and milk production can be maintained on rations in which feed proteins are largely replaced by urea.

It has been suggested that micro-organisms present in the rumen convert urea into a complete assortment of essential amino acids.

ESSENTIAL VITAMINS.—The list of ten dietary essential vitamins includes only those that have been definitely prepared in chemically pure form. Feeding tests indicate the possible existence of several others. All ten are not dietary essentials for all animal species. For example, ascorbic acid is not a dietary essential for animals other than man, monkey and the guinea pig; however, it apparently is necessary for some other species since it occurs in the body fluid of dogs, rats, and other species maintained on ascorbic acid free diets.

So far as definitely known cattle require only the fat soluble Vitamins A and D. They may possibly require fat soluble E and K. The water soluble vitamins while necessary for the life of the cow are not dietary essentials since they are synthesized in the rumen, apparently in sufficient amounts.

VITAMIN E FOR REPRODUCTION.—Vitamin E is required for reproduction in the rat but is claimed to be not necessary for reproduction in the goat. Vitamin D obtained by irradiating ergosterol is a potent antirachitic for mammals but has little value for poultry. From these examples it is evident that the vitamin requirements of a given animal can not be judged by experiments on other species.

A large number of feeding tests have been conducted having for their object the determination of the optimum amounts of the specific dietary ingredients required for growth, body maintenance, reproduction and lactation in the different classes of domestic animals. Many

conclusions drawn from these tests are not valid since the results were often influenced by the absence of essential ingredients not known or not considered in planning the ration. For such tests it is necessary for the ration to contain all essential ingredients in ample amounts, the only variable being the one ingredient which is being studied.

PROGRESS WITH VITAMINS.—Within the last two or three years there have been developed rapid and accurate chemical methods for the estimation of the vitamin factors and great progress is being made in developing optical and electrochemical methods for measuring "trace" mineral elements.

It is now practical for the experimenter to have rather complete information as to the composition of a ration. Also the vitamin factors are available in concentrated form so that the dietary level of any one of them can be adjusted without disturbing the levels of the other ingredients. The vitamin concentrates are proving particularly helpful in planning rations for small laboratory animals.

In the past the adequacy of a ration has been judged by measurements on the rate of growth, feed consumption, maintenance of body weight, milk production, size and vigor of offspring, etc. In present day tests these necessary observations are being supplemented by clinical tests. For example, the carotene level in blood and examination of the nerve endings in the eye were recently used in judging the vitamin A adequacy of a ration for growing calves.

Visual adaptation in dim light, (a measurement of the minimum intensity of light visible to the dark adapted eye) is extensively used for studying the vitamin A requirements of man. By this method it can be easily shown that pregnant and lactating women require more vitamin A than under normal conditions.

A deficiency of dietary thiamin results in the accumulation of lactic acid in the blood with resultant slowing of the rate of the heart beat which is easily recorded by sensitive instruments (the bradycardia method). A titration of ascorbic acid in the urine shows whether a human diet contains enough vitamin C.

A sensitive test for vitamin E deficiency in the rabbit is a rise in the creatine content of the urine; the degeneration of muscle tissue (muscular dystrophy) is not evident until later. The time of blood clotting is used in studying vitamin K. Iron, copper, and cobalt have specific effects on hemoglobin as shown by blood analyses.

Effect of Calcium Salts on Utilization of Lactose

Rats were given an adequate diet containing 60 per cent milk sugar plus 1-0 per cent or 0-5 per cent calcium added as Ca phosphate, carbonate, citrate, lactate, laevulinate and gluconate, respectively. At the higher level Ca lactate was somewhat toxic while Ca gluconate resulted in poor survival, loss of weight, severe diarrhoea and low blood sugar, the toxicity being less at the lower level. Rats given the other calcium salts showed low growth rate, diarrhoea, blood sugar and cataract similar to those given to lactose and no added calcium.

Tests in which the lactose was replaced by starch, dextrin, sucrose, glucose or galactose showed that the addition of the calcium salts did not inhibit absorption or utilization of these carbohydrates. Sodium gluconate had an even more severe effect than the Ca salt when added to the lactose diet indicating that the gluconate radicle was the responsible factor, according to H. S. Mitchell, G. M. Cook and K. L. O'Brien.

Soybean Convention in August

The American Soybean Ass'n will hold its annual two-day convention at Dearborn, Mich., on Aug. 19 and 20, according to announcement by President G. G. McIlroy, Irwin, O., and Sec'y J. B. Edmondson, Clayton, Ind.

Outstanding authorities on production and industrial use of soybeans will appear on the program, including Wheeler McMillin, president of the Farm Chemurgic Council, and E. F. (Soybean) Johnson of the Soybean Processors Ass'n, the latter again reviewing the future outlook for soybeans.

The annual banquet will be held the evening of the 19th, with W. J. Cameron of the Ford Motor Co. acting as toastmaster and Charles M. Newcomb, and Governor John W. Bricker, of Ohio, among the speakers.

Grape Fruit Pulp as Dairy Feed

During 90-day double-reversible feeding periods in each of three consecutive years, dried grapefruit pulp was compared with dried beet pulp in balanced dairy rations, at the Florida Agricultural Experiment Station. These were fed to 24 Jersey cows at a level to supply 40 per cent of the total digestible nutrients, replacing one-third of the hay and silage, and a part of the mixed concentrates.

The production of 100 lbs. of milk (Jersey) required the consumption of 106.8 lbs. corn silage, 34.7 lbs. No. 1 alfalfa hay, 42.5 lbs. of dried grapefruit pulp, 9.75 lbs. cottonseed meal (41 per cent) and 9.75 lbs. corn feed meal. Likewise with 47.6 lbs. of dried beet pulp, the cows ate 110.1 lbs. corn silage, 36.2 lbs. alfalfa hay, 9.85 lbs. cottonseed meal and 9.85 lbs. of corn feed meal, while producing 100 lbs. of milk.

Neglecting changes in body weight, 42.5 lbs. of dried grapefruit pulp were equivalent to 45.1 lbs. of dried beet pulp, as used in these trials. Milk yields obtained were slightly to the advantage of the grapefruit pulp, and gains in bodyweight slightly in favor of dried beet pulp.

It is concluded that dried grapefruit pulp is equal in feeding value to dried beet pulp, when fed as a carbohydrate concentrate in mixed dairy feeds.

Associated Digestibility of Feeds

Trials were conducted to measure the change in digestibility of certain roughages and succulent feeds due to the incorporation of each of these feeds in a ration with one other feed, the digestibility of one of the individual components in each mixed ration being compared with its digestibility when fed alone.

Three series of experiments dealt, respectively, with the effect of the addition of oat hulls to hay, corn silage, and mangels; the effect of the addition of straw to hay and corn silage; and the effect of the addition of hay to silage and mangels. Data accruing from these trials are presented in detail.

No associative effect so far as total digestibility and total digestible nutrients were concerned was found to exist among hay, oat straw, corn silage, and mangels. The digestibility of oat hulls calculated for a mixed ration with either hay, corn silage, or mangels was lower than the digestibility of hulls when fed alone.

The trend of nitrogen digestibility did not generally follow the trend of total digestibility. The addition of hay to silage or mangels tended to decrease the digestibility of nitrogen, whereas with the addition of oat hulls to hay or silage the digestibility of nitrogen in the mixture tended to increase.—W. M. Davidson and others in Scientific Agriculture.

Feeding to Correct Milk Flavor

W. J. Corbett and P. H. Tracy of the University of Illinois point out that various investigators have suggested that the degree of saturation of the milk fat was related to the oxidation of the fat and occurrence of oxidized flavor. The saturation of the fat was varied by feeding one group of 3 cows coconut oil and another group of 3 cows corn oil.

The oils were fed for a period of 12 days, omitted for 10 days, and then the groups were reversed and again fed corn and coconut oil for a period of 12 days. The coconut oil lowered the iodine number approximately 4 per cent and the corn oil increased the iodine number approximately 15 per cent.

Each group of cows contained one animal that gave milk which developed the oxidized flavor "spontaneously," and two cows whose milk developed the oxidized flavor in the presence of copper, one cow's milk being more resistant to copper than the other. All samples of milk were pasteurized in glass immediately after milking and divided into several lots. Copper sulphate was added to some of the milk samples. Changing the degree of saturation of the fat had no effect on the development or occurrence of the oxidized flavors.

Studies of the anti-oxidative effect of tyrosine and the more soluble tyrosine esters have shown them to be very effective antioxidants in milk when added at the rate of .02 per cent-.03 per cent.

Kansas City, Mo.—A meeting of railroad men and flour millers on June 26 heard Dr. R. T. Cotton and George Wagner, of the Bureau of Entomology, propose paper linings in flour sacks to prevent infestation of flour with grain weevil when loaded in insect-infested cars.

A wet corn grind of 5,158,366 bus. during June was reported by 11 corn products industries. This compares with 6,523,729 bus. in May; 5,414,489 bus. in June, 1939.

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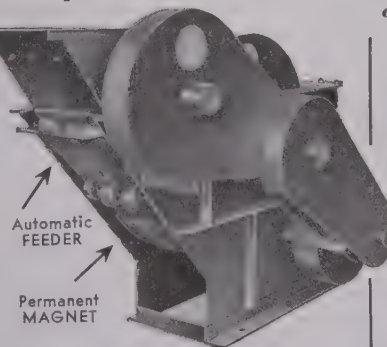
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Poultry Feeds and Feeding

Ithaca, N. Y.—At the annual meeting of the Poultry Science Ass'n H. L. Kempster of the University of Missouri was elected president and W. A. Maw of MacDonald College, Canada, sec'y-treas. J. C. Bauernfeind of Cornell was awarded \$100 for outstanding research. The 1940 Borden gold medal and \$1,000 went to Dr. Warren of Kansas State College as the result of his poultry research. The next annual meeting will be held at Stillwater, Okla.

Sulphur in Prevention of Coccidiosis

Tests were made of four grades of sulphur for prevention of coccidiosis at the Louisiana University Experiment Station by O. E. Goff and C. W. Upp.

The data indicate that each of the four grades of sulphur tested—namely, flowers of sulphur, commercial flour sulphur, 325-mesh sulphur, and micronized sulphur, has value in preventing coccidiosis mortality.

No accurate evaluation of the protective value of each sulphur grade was made, but data indicate that of the ground crude sulphurs, the finer the grind, the greater the effectiveness.

Commercial flour sulphur retarded growth less than other grades of sulphur and gave the least protection from coccidiosis.

The addition of poultry charcoal in the amount of 5 per cent to rations containing 5 per cent sulphur apparently enhanced the protective value of the rations.

Regardless of the grade or amount of sulphur fed, chicks inoculated with coccidia produced oocysts which were viable, would sporulate, and produce clinical evidence of the disease.

The use of elemental sulphur in the prevention of coccidiosis remains in the experimental stage and recommendations for its use are not presented.

Soybean Oil Meal for Chicks and Layers

At the Wisconsin Experiment Station J. B. Christiansen and others tried various supplements for soybean oil meal.

In a series of chick growth experiments involving lots of both White Leghorn and Barred Plymouth Rock chicks, the value of various commercial protein concentrates as supplements to chick rations, in which soybean oil meal furnished the main source of protein, was determined. Linseed oil meal and corn gluten meal at 5-per cent levels failed to enhance the growth-promoting value of the ration. Fish meals of 3- or 4-per cent levels proved to be very effective supplements, sardine meal ranking highest in growth-promoting value, followed in order by whitefish meal and menhaden fish meal. Dried skim milk was inferior to the fish meals but superior to either meat scrap or casein in this regard.

In three separate experiments it was demonstrated that eggs produced by pullets receiving soybean oil meal as the principal source of protein had a low average percentage hatchability, mainly due to a severe fall in hatchability during the winter months. The addition of small amounts of crude casein to the soybean oil meal ration failed to increase the hatchability significantly, but the addition of flavin-bearing supplements, such as yeast, dried whey, or dried skim milk, consistently improved it. Similar favorable results were obtained by adding synthetic d-riboflavin to the diet, indicating that flavin

was the effective factor in the above supplements. Manganese also proved an effective supplement in counteracting the winter slump in hatchability.

Non-Vitamin Essentials for Poultry

By H. J. ALMQUIST before Feed Dealers Nutritional Conference at University of California

AMINO ACIDS: Practically all studies of essential nature of amino acids have been made with the rat.

Results have been assumed to apply to chickens as well. Obstacles to amino acid studies with chickens have been serious:

1. Necessity for complex diets of natural foods in order to get any growth.
2. Failure of attempts to replace cereals and thus get rid of virtually uncharacterized and unknown cereal proteins. Diets using single sources of well-known proteins not successful in past.
3. Vitamin requirements of chicks only lately well enough understood to permit use of simplified diets containing adequate sources of these vitamins free of protein.
4. Other non-vitamin essentials only recently identified and brought under sufficient control to permit amino acid studies.

In practical poultry feeding we must still rely on variety in sources of protein to combat possible amino acid inadequacies. These sources of protein might be more effectively used if we had more good information on amino acid requirements of chickens.

At present, we have specific information on only a few amino acid requirements of chickens as compared to those of rats.

- a. Tryptophane is required.
- b. Histidine is required.
- c. Arginine. Here we have outstanding difference between the rat and chick. Rat can synthesize arginine and grow without it, chicken appears totally unable to do so and loses weight.
- d. Glycine. The simplest amino acid. Rat apparently does not require it. Chicken must have it in diet to attain optimum growth. Perhaps can synthesize it to a limited extent.

Experimental diets based on both casein and fish meal did not contain adequate glycine for chick growth.

The examples of arginine and glycine which furnish a striking contrast between the rat and the chick, warn us not to speak too generally and too glibly about essential amino acids for chickens. These two cases furnish sufficient warning that the chick may not follow the rat in respect to other amino acids which are yet to be studied carefully with the chick.

NEW CEREAL FACTORS.—Aside from vitamins and proteins supplied by cereals we have recently come to realize that other factors are present in cereals.

Chickens apparently require certain carbohydrates aside from the common starches and sugars.

When attempts were made to replace cereals by their known equivalent in vitamins, carbohydrate, minerals and protein, growth of chicks was not good.

CHOLINE.—Abbott & De Masters: 75 mg. 1 hen. 1 day. required for normal rate of production. Experimental diet rather poor choice.

Choline required for prevention of fatty liver and certain types of hemorrhagic degeneration of liver and other tissues.

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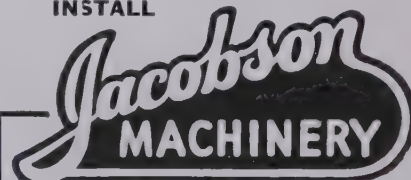
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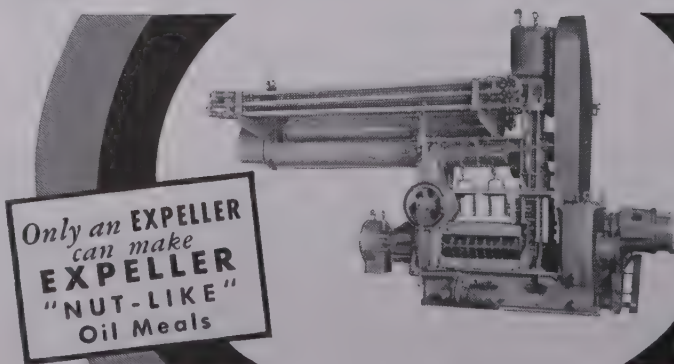


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Poultry Feed Prices Up and Eggs Down

Prices to producers on June 15 were 3 per cent lower than last year for eggs, 1 per cent lower for chickens, and 12 per cent lower for turkeys, but the cost of feed was 16 per cent higher than last year.

Egg production during June was the largest for that month since 1930, totaling 11,069,000 cases. June production last year was 10,578,000 cases and the 5-year (1934-38) average was 10,233,000. The highest June production of record was 11,803,000 cases in 1928. But present egg output was accomplished by 12 per cent fewer layers than in 1928.

The price received by producers for eggs on June 15 was 14.4 cents per dozen, the lowest for that date since 1911 except for the record low figures prevailing during the worst of the depression years of 1931-34, when a June 15 low average of 10.1 cents per dozen was touched in 1933. June 15 chicken prices were also low, the average of 13.3 cents per pound being the lowest since 1915 except for the years 1932-34, during which a low June 15 average of 10.0 cents per pound was recorded. The average prices received for turkeys, mostly breeding hens, was 12.9 cents per pound, which was the lowest for June since 1934, when the average stood at 11.1 cents.

Poultry feed costs average 121.7 cents per 100 pounds, this being considerably higher than the figures of 105.0 cents and 105.9 cents in 1939 and 1938, respectively, although lower than the 10-year (1929-38) average.

The continued unfavorable relationship between feed costs and income from sales led to heavier than usual marketing of layers during June. The impending decrease in the number of layers for next season due to reduced hatchings has probably been made greater by this sacrifice of laying stock.—U. S. D. A.

Protein Requirements of White Leghorn Pullets

J. S. Carver and others at the Washington Experiment Station reared duplicate pens of White Leghorn chicks to 22 weeks of age at nine different levels of protein feeding. Cereals, alfalfa leaf meal, dried whey, and herring fish meal constituted the principal ingredients in all rations. Under plans 1 to 4 the chicks received 13, 15, 17 and 19 per cent protein, respectively, thruout the growing period, while under plans 5 to 9 the chicks were started at either the 15, 17, or 19 per cent levels and were reduced to lower levels at progressive ages.

Pullets at the 19 per cent level for from 1 to 3 or 1 to 6 weeks showed no advantage in body weight over those fed a 17 per cent level at the end of 22 weeks. The groups started at the 13 or 15 per cent level were considerably lighter in weight at 6 weeks of age and failed to overcome this disadvantage to 22 weeks of age. After the sixth week all the growth curves were nearly parallel.

The average feed consumption of the groups fed the low level of protein was significantly lower during the first 6 weeks, but after this age there were no significant differences in the average feed consumption per bird. Up to 12 weeks of age all groups required about the same number of feed units per unit of gain, but from 12 to 22 weeks the groups fed the higher levels of protein required more feed per unit of gain. All groups showed the highest efficiency of feed utilization during the first 6 weeks, with a progressive decline in efficiency thereafter.

The level of protein feeding during the growing period had little influence on pullets during the laying year with respect to gain in weight or final weight, mortality, rate of egg production, or initial and final albumin index and egg weight. It is concluded that the

chick diet should contain approximately 17 per cent of high-quality protein from 1 to 6 weeks, 15 per cent from 7 to 12 weeks, and 13 per cent from 13 weeks to maturity.

New Growth Factor for Chicks

D. Mark Hegsted and others of the University of Wisconsin offer evidence in Poultry Science of a new growth factor for chicks which is distinct from factor U, chondroitin, arginine, or any of the water soluble factors known to be required by the chick or rat. Some properties of this factor are presented.

The necessity of vitamin B₆ for growth and maintenance of chicks is shown.

A high incidence of spastic paralysis on some rations is reported and preliminary studies on the properties of the factor (s) concerned and its distribution are given.

The occurrence of yellow livers not prevented by the known lipotropic factors is reported.

The relation of the above factors to those reported by other investigators is discussed.

Protein Deficiency of Hybrid Corn

The Southern Mixed Feed Manufacturers Ass'n has recently issued a bulletin stating:

"Hybrid corn will analyze only about 7½ per cent protein, and it is being planted in the South in annually increasing acreage. Therein feed manufacturers are faced with a problem. Yellow corn meal and chops offer an example.

"The situation was brot forcibly to the attention of the manufacturers again, the other day, when manufacturers shipping into Mississippi and local manufacturers as well, were notified, in batches, of protein deficiencies in some of their feeds, particularly horse and mule. Your secretary went to Jackson, Miss., to discuss this condition with Commissioner Corley and was informed the state, on the suggestion of its chemical department, was loath to lower the protein requirement under its standards, or set up a tolerance, until such time as the feed control association could rule officially on it.

"In the meantime, in view of Commissioner Corley's announced determination to enforce the state's standards and regulations 'fairly and impartially to the best of my ability' we suggest

the addition of cottonseed meal or some similar high grade protein ingredient to balance off the deficient corn."

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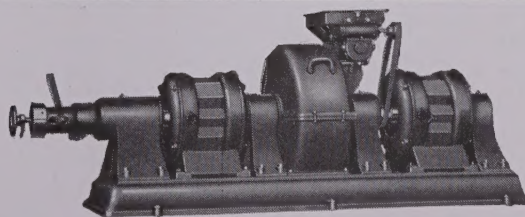
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The Vitamin B Complex

By T. H. JUKES, University of California, before Feed Nutritional Conference at Davis, Cal.

Vitamin	Symptoms of deficiency	Chemical Properties of the vitamin	Amounts needed by poultry (minimal) (1,000,000 micrograms) = 1 gram	Sources of the vitamin	How provided most economically in practical poultry rations
A	Young Birds: Matter in eye and nasal passages. Loss in weight. Paralysis, death. Adults: Egg production stops. Nutritional roup. Loss in weight. Death.	Fat-soluble. Plant form is orange red pigment, carotene (several forms of carotene known). Animal form is nearly colorless, formed in liver from carotene. Both forms easily destroyed by oxidation.	Chicks: 150 international units (I. U.) per 100 G. feed. Turkey poult: 800 I. U. per 100 g. feed. Laying hens: 500 I. U. per 100 g. feed. 1 I. U. = 0.6 micrograms of carotene.	I. U. per gram Fresh Green leaves: 100. Alfalfa meal of good quality: 100 to 200. Yellow corn: 7. Fortified fish oil "3,000 A": 3,000.	Alfalfa meal 5 to 8 per cent in mash, Fresh greens, Fish liver oils; when freshly mixed and of known potency.
B	"Polyneuritis." Complete paralysis with head drawn back. Loss of weight. Death.	Water-soluble. Colorless. Also called "Thiamin." Stable under ordinary conditions; slowly destroyed by prolonged cooking in water.	Chicks: 150 microgm. per 100 g. feed. Adult birds: 60 microgm. per 100 g. feed (estimated).	Microgm. per gm. Whole grains: 3 to 4.5. Wheat bran: 6. Wheat middlings: 15. Rice bran: 15.	Whole grains. Grain by-products. No danger of deficiency exists.
C	Not needed by poultry. They make their own vitamin C.				
D	Young birds: Rickets: soft bones, soft beak; poor growth. Ruffled feathers. Tendency to squat. Laying Birds: Egg production is reduced. Poor Hatchability, poor shell quality. Adult males: No symptoms known.	Fat-soluble. Colorless. Exists in several forms. The most important form for poultry is formed from 7-dehydrocholesterol by the action of light. Stable under ordinary conditions.	Chicks: 25 (A. O. A. C.) chick units per 100 g. feed. Poult: 200 chick units per 100 g. feed. Laying hens: 50 chick units per 100 g. feed. The above figures apply only in absence of direct sunlight. 1 chick unit = 0.025 microgram of vitamin D ₃ .	Direct sunlight. Biologically tested fish oils (on which the number of chick units per gram is stated on the label). Many fish oil blends are standardized to contain 40 chick units per gram.	
E	Young birds: Nutritional encephalomalacia. Laying birds: Loss of fertility and hatchability.	Fat-soluble. Stable under ordinary conditions. Destroyed by rancidity.	Not known, but presumed to be small, since E deficiency is so hard to produce experimentally.	Whole grains. Grain by-products. Fresh greens. Alfalfa meal. Vegetable oil meals. No danger of deficiency exists.	
(1) Riboflavin					
G	Young chicks: Slow growth. Curled-toe paralysis. Young Turkeys: Slow growth. Dermatitis. Laying birds: Low hatchability. Decreased egg production.	Water-soluble. Orange-yellow pigment with green fluorescence. Stable under ordinary conditions. Destroyed by prolonged exposure to light.	Chicks and poult: 270 microgm. per 100 g. feed. Laying hens: 200 microgm. per 100 g. feed (estimated). Breeding hens: 300 microgm. per 100 g. feed (estimated).	Microgm. per gm. Alfalfa meal of good quality: 14 to 22. Fresh greens: 5. Dried skim milk: 16 to 25. Dried whey: 16 to 32. Whole grains: 1.	Alfalfa meal. Fresh greens. Dried milk and dried whey.
(2) Pantothenic Acid					
G	Young chicks: Slow growth. Dermatitis. Young Turkeys: Slow growth. High mortality. Laying birds: Unknown.	Water-soluble. Colorless. Stable under ordinary conditions.	Chicks and poult: 1,400 microgms. per 100 g. feed. Adult birds: Not known but known to be less than for chicks.	Microgm. per gm. Cane molasses: 80. Dried whey: 50. Dried skim milk: 30 to 40. Wheat bran and rice bran: 25. Alfalfa meal: 15 to 40. Whole grains: 10. Fresh greens: very low.	Bran. Cane molasses. Dried milk products.
(3) Vitamin B ₆					
	Young birds: Slow growth. Paralysis. High mortality.	Water-soluble. Colorless. Stable under ordinary conditions.	Chicks: Probably about 300 microgms. per 10 g. feed. Other classes of birds: Unknown.		Fresh greens. Alfalfa meal. Grain by-products. Whole grains.
(4) Nicotinic acid—not known to be needed by poultry					
(5) Other unidentified water-soluble vitamins are probably necessary. These are present in green leaves and in grains.					
K	Blood will not clot.	Fat-soluble. Stable under ordinary conditions. Yellow. Several forms are known.	About 13 microgms. of vitamin K ₁ per 100 g. of feed.	Large amounts are present in green leaves. ½% of alfalfa meal will supply the complete requirement. No danger of deficiency exists.	
"Gizzard Factor"	Young birds: Erosions in the membrane lining the gizzard. Adult birds: Unknown.	Fat-soluble. Easily destroyed by oxidation.	Unknown.	Fresh greens. Alfalfa meal. Wheat bran. Granite grit diminishes the amount of gizzard factor needed.	

1. **THIAMIN (VITAMIN B₁)** (C₁₂H₁₇N₄O₄OSCI). Stored in the seed of the plant, presumably to accelerate growth of the embryo after germination. The outer coat or bran of cereal grains, together with the germ are hence one of the primary sources of vitamin B₁ which is needed by all animals. Rejection of these materials from the human diet has led to a corresponding increase of thiamin in the diet of domestic animals, which now receive the bran and middlings removed from wheat in milling. However, ruminants derive a large part of their supply of thiamin and other members of the vitamin B complex from synthesis of these vitamins by bacteria in the digestive tract. Thiamin functions in the breakdown of pyruvic acid, which is one of the steps in the oxidation of carbohydrate by the cell. Thiamin is destroyed by moist heat.

2. **RIBOFLAVIN (C₁₇H₂₀O₆N₄)**. A yellow pigment which combines with special proteins to form enzymes which specifically catalyze certain chemical reactions in living tissue. These reactions lead to the oxidation of food to yield energy for vital processes. Riboflavin is needed by all animals which have been tested. Green leaves are the primary source of riboflavin for animals; the cereals contain only very small amounts. Riboflavin is destroyed by direct exposure to light.

3. **NICOTINIC ACID (C₆H₅O₂N)**. Occurs in living tissues as part of the molecule of a "co-enzyme" which is concerned in the oxidation of food. One function of this "co-enzyme" is to act in co-operation with riboflavin. Nicotinic acid is of importance in the nutrition of humans, pigs and dogs, but a deficiency of nicotinic acid has never been produced in poultry under any experimental conditions. Stable to heat. Present in green leaves, meat, and yeast.

4. **PYRIDOXINE (VITAMIN B₆)** (C₈H₁₁O₃N). The exact role of vitamin B₆ is more obscure than is the case of the preceding vitamins. Its distribution in foods has not been extensively studied. Cereal grains and brans are known to be good sources. Like nicotinic acid, it is relatively stable to heat. It is probably needed by all animals. A deficiency of vitamin B₆ in poultry rations is improbable.

5. **PANTOTHENIC ACID (FILTRATE FACTOR) (C₈H₁₇O₅N)**. Nothing is known of the chemical function of pantothenic acid in living tissues, but evidence obtained from nutritional studies makes it highly probable that pantothenic acid is an essential link in the chain that includes thiamin, riboflavin and nicotinic acid. Pantothenic acid is needed by poultry and probably by all other animals. It is widely distributed, but many foods are only moderately good sources. Cane molasses, bran, dried milk and dried whey are important sources. Pantothenic acid is destroyed by moist heat, altho not quite so readily as thiamin, and is also destroyed by prolonged dry heat.

6. **UNIDENTIFIED FRACTION**. Various nutritional effects have been ascribed to unidentified vitamins said to differ from the five listed above. One such factor, biotin, has been crystallized, but not much is yet known of its role in nutrition. Included among the unidentified factors are the anti-grey-hair factor, factors U and W, the so-called Cornell growth and reproduction vitamin, the grass juice factor, and vitamins B₇ and M. Most of these factors need to be reexamined with the aid of more adequate diets containing sufficient amounts of the five identified members of the vitamin B complex. When this is done, it is probable that some of the names will disappear.

Topeka, Kan.—At a wheat field day program held here June 16 Professor R. I. Throckmorton of Kansas State College spoke on wheat growing in eastern Kansas. Also speaking over radio station WIBW were J. C. Mohler, Dr. John H. Parker, Dr. E. G. Bayfield and A. L. Clapp, sec'y of the Kansas Crop Improvement Ass'n.

Mineral Nutrition

By H. S. WILGUS, JR., Colorado Exp. Sta.,
before Texas Feed Mfrs. Ass'n.

[Continued from page 38, July 10.]

MANGANESE deficiency in poultry is recognized specifically by perosis in chicks, poults, and young game birds three to eight weeks old. It is easily remedied by using liberal quantities of feedstuffs rich in manganese, such as shorts and rice bran, by adding manganese sulphate to the ration where need is indicated, and by limiting calcium and phosphorus. Deficiency of manganese in other farm animals is not yet recognized.

Manganese is known to be required by poultry for normal growth, egg production, and hatchability. A deficiency is manifested by perosis and subnormal bone development in young poultry three to eight weeks old, lower egg production, weaker egg shells, lower hatchability accompanied by nutritional chondrodystrophy (failure of normal cartilage development) in the embryos, and head tremors in newly hatched chicks. Recent evidence shows that excess calcium and phosphorus supplied by too much bonemeal, limestone or oystershell in chick rations cause more perosis by precipitating in the digestive tract and combining with the manganese there, making it unavailable to the chick, although chemical analysis shows plenty to be present in the ration. Excess iron also may render manganese unavailable in a similar manner. Bonemeal or bone in meat scrap seems to aggravate perosis less when finely ground than when coarsely ground.

Recent evidence from Wisconsin indicates that direct sunlight aids in manganese utilization. More recent evidence from Missouri and Cornell indicates that there is a specific organic factor aiding in manganese utilization. Manganese deficiency in poultry is common in chicks on wire floors and in batteries, especially in heavy breeds. It is prevented by limiting calcium and phosphorus to optimum levels and by using liberal quantities of wheat shorts or middlings or of rice bran, since these by-products are rich in manganese and are presumably rich in the organic preventive-factor. These steps usually suffice for birds under floor and range conditions with sunshine. Where feeds are designed to be used under all conditions, it is probably an advisable precaution to add 50 parts per million of manganese to the mash by adding 4 ounces of manganese sulphate powder (at least 90% manganese sulphate) to each ton of feed. This has been shown to be well under any levels causing toxic effects. Natural manganese carbonate is not utilized by poultry. A few cases of early perosis are usually found even on the best of rations.

IODINE.—The physiological necessity for iodine in the formation of thyroxine by the thyroid gland is well known and needs no elucidation. Equally well known is the function of this hormone in regulating body metabolism. Less well established is the possibility of another factor or factors in the thyroid important in the maintenance of the balance between thyroid function and that of the other endocrines. There are some indications of a relationship between iodine or thyroid activity and calcium metabolism. Some evidence has also been presented that the functioning of certain vitamins may be related to thyroid activity. Goiter resulting from iodine deficiency has been recognized in farm animals, including poultry, for many years in the northern states from the Northwest to the Great Lakes Basin. Peculiarly enough, very little has been done to determine the actual iodine requirements of farm animals or even to determine whether the prevention of goiter in itself is

sufficient to assure that the animal is receiving enough iodine. Recommendations given at the present time are largely the result of trial and error and have been worked out from such observations and expressed in amounts easily measured with such devices as the farmer has available. Inorganic sources of iodine are as efficacious as organic sources.

IRON deficiency is the commonest cause of nutritional anemia (low blood iron and hemoglobin) in this country. It is not uncommon in suckling animals, but it is not yet recognized to be of economic importance except in newborn pigs reared away from the soil. In this case painting the sow's udder with a saturated solution of iron sulphate is efficacious in preventing weak, anemic suckling pigs. Giving the pigs access to fresh, clean soil is another remedy.

COPPER AND COBALT deficiencies also cause anemia, but fortunately only a small area in Florida is known to be deficient in these elements in the United States. A mere trace of these elements in cheap inorganic forms suffices as treatment and preventive.

HOW MUCH MINERALS.—Much research in State and Government Experiment Stations and in other laboratories has given a fair idea of how much of these essential elements is required in many instances. Recent figures for various farm animals are presented in the 1939 Yearbook of Agriculture, "Food and Life." If it is known how much mineral there is in the feeds used in the ration and what the requirements are, it is usually a simple matter of mathematics to determine whether mineral supplementation is essential. As a rule, tables of average analyses as found in Morrison's "Feeds and Feeding," and in the 1939 Yearbook of Agriculture, suffice in estimating the adequacy of rations in various nutrients including minerals. Of course, chemical analyses of each lot are much more definite. Fortunately, ingredients of a known grade or source tend to be more or less uniform. Thus in poultry rations, the formulas are calculated to satisfy requirements for protein and fiber, calcium, phosphorus, and vitamins A, D, and G, and such calculated analyses rarely fail to be in remarkably close agreement with actual ones.

With our present limited knowledge of actual requirements and as a general rule, feed manufacturers and feeders would do well to formulate rations adequate in protein, fat, fiber, calcium, phosphorus, and vitamins, to supply adequate salt, and not to worry about other minerals unless deficiencies of them occur in their trade area. Lack of iodine and manganese are the two most common of deficiencies.

It is obvious from this presentation that a complex mineral mixture of the familiar "shot-gun" variety is not to be recommended, for economic reasons if no others. However, it should be pointed out that not only is the addition of minerals beyond their required amounts incapable of any additional benefits or of any "tonic effect," but such an addition in excess of requirements may prove to be highly detrimental. The unintelligent recommendation of a mineral mixture for any kind of "leg-weakness" in chickens is an all-too-well-known-example. Very often such leg weakness is perosis and is only intensified by more minerals.

Specifically, excess of the mineral elements most frequently found in the various mineral mixtures is harmful in the following ways. If phosphorus is already approaching the minimum requirement, excess calcium may cause a low-phosphorus type of "rickets" by causing a heavy excretion of phosphorus from the body. Conversely, a large excess of phosphorus may cause low-calcium "rickets." Calcium and phosphorus in excessive quan-

ties render manganese unavailable, as already mentioned, and also interfere with iron and probably iodine assimilation. Excess iron not only prevents manganese assimilation, but may cause a phosphorus deficiency by forming insoluble iron phosphate in the intestines. Excess manganese, likewise, may form a relatively insoluble phosphate and in addition is quite toxic. Cobalt and copper are toxic in amounts which are considered mere traces by the layman. Fluorine is also toxic in trace quantities and has caused heavy losses through the use of rock phosphate and its derivatives which are usually very high in fluorine unless carefully treated. Boron at a level of 0.1% is toxic to chickens. Sodium bicarbonate in excess causes kidney degeneration in chicks. Under certain conditions sulphur will cause rickets in chicks, even with vitamin D oils present.

Not only may excess of minerals be harmful, but certain forms of minerals may be unavailable to the animal. Thus iron oxide, a nearly universal component of such mixtures, is very ineffectively used by animals. Natural manganese carbonate, as rhodochrosite, is not available to the chick, and yet large quantities of it have been sold specifically for poultry feeds, a fact which may account for much of the perosis in chicks and poults presumably getting manganese supplementation.

Mineral Feed Mfrs. to Meet Sept. 6

The Mineral Feed Manufacturers Ass'n will hold its annual meeting Sept. 6 at the Olympia Fields Country Club, Chicago, Ill.

After the business session beginning at 10 a. m. luncheon will be served at 12:30 followed in the afternoon by a golf tournament, winding up with the annual dinner at 6:30 p. m.

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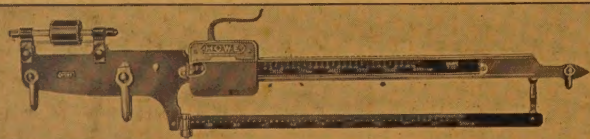
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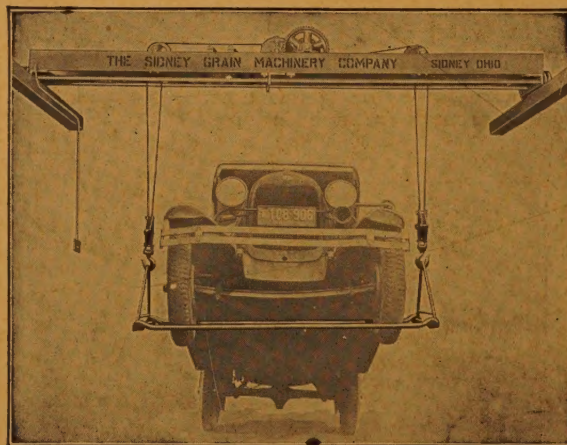


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